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ABSTRACT

This report describes the status of academic libraries in 1996, based on results of the 1996 Academic Library Survey, a part of the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics. The report presents detailed tabulations for 1996 and historical comparisons with previous years. Topics covered include: (1) number and diversity of academic libraries, including historical growth and branch libraries; (2) services, including electronic services, circulation, reference transactions, hours of service, presentations, interlibrary loans, and visits to the library; (3) collections, including change in volumes held/added, distribution of volumes of books and bound serials by type of institution, differences in volumes per FTE (Full-Time Equivalent) student, and number of volumes per institution and academic library standards; (4) staff, including distribution of FTE library staff by type, FTE staff per 1,000 FTE students, change in staff since 1974, changes in staff relative to total institution staff and students; and (5) expenditures, including distribution of library operating expenditures, distribution of information resource expenditures, changes in operating expenditures, and operating expenditures as a percentage of total education and general expenditures. The appendices include the methodology, detailed tables, academic library indicators, and the survey questionnaire. (Contains 46 references.) (MES)

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Survey Report May 2001

The Status of Academic Libraries in the United States

Results from the 1996 Academic Library Survey with Historical Comparisons

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NATIONAL CENTER FOR EDUCATION STATISTICS

Survey Report May 2001

The Status of Academic Libraries in the United States

Results from the 1996 Academic Library Survey with Historical Comparisons

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Members of the IPEDS Library Project Advisory Committee during the time of the study were: Julia Blixrud, Association of Research Libraries; Jan H. Kemp, Texas Tech University; Paul DuMont, Dallas County Community College District; Ron Naylor, University of Miami Libraries; Carolyn Norman, California Community Colleges; Leland M. Park, Davidson College; Keith Lance, Colorado State Library; Hugh Thompson, ALA.

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Highlights

Services

- In 1996, 3,408 of the 3,792 postsecondary degree-granting institutions in the United States reported that they had their own academic library.

- Just over one-fourth (28 percent) of the academic libraries in postsecondary degree-granting education institutions have branch libraries, and among those with branches, the mean number of branches was 2.7 (table 1). Branch libraries are auxiliary library service outlets with quarters separate from the central library that houses the basic collection.

- The rapid development of electronic and Internet library services continues. In 1996, over 90 percent of institutions had electronic indexes (such as citation or topical indexes) and reference tools (such as Statistical Abstracts), and 81 percent had Internet access from within the library (table 2).

- Eighty percent of academic libraries provided access to electronic catalogs that included the library's holdings from within the library, and 59 percent provided access to the electronic catalog for clientele off-campus (table 2).

- In fiscal year (FY) 1996, general collection circulation transactions in the nation's academic libraries at postsecondary degree-granting institutions totaled 186.5 million, and reserve collection circulation transactions totaled 44.9 million (table 4). General circulation includes library materials, such as books, videos, and records taken out or charged out by patrons. General circulation also includes renewal of charged library materials. Reserve materials include those that have been removed from circulation and set aside so they will be available for a certain academic course or activity offered by the institution.

- In 1996, 18.5 general circulation transactions were conducted per full-time equivalent (FTE) student (enrolled across all institutions with an academic library). The number of general circulation transactions varied widely by type of institution attended, ranging from 8.1 transactions per FTE student at 2-year Associate of Arts institutions to 35.5 transactions per FTE student attending specialized institutions such as military or law schools (table 5).

- Interlibrary loans are the number of transactions related to filling requests for materials from other libraries. In 1996, academic libraries provided a total of 9.4 million interlibrary loans to other libraries (both academic and other types of libraries) and received 7.5 million loans (table 4). With the advent of more electronic searching and shared catalogs, interlibrary loans have increased in recent years. For example, interlibrary loans *received* by academic libraries increased by 64 percent over the period between 1990 and 1996 (table 4).

- In 1996, on average, academic library physical facilities were open about 76 hours per week. The largest percentage of academic libraries (44 percent) reported providing 60-79 hours of

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service per typical week. Forty percent, however, provided 80 or more public service hours per typical week (figure 4).

- In 1996, there were about 1.6 visits per week to the library per full-time-equivalent (FTE) student based on a gate count of 16.5 million visitors per typical week (table 4). A gate count is the number of persons who physically enter library facilities (a person can be counted more than once).

Collections

- Taken together, the nation's 3,408 academic libraries at postsecondary degree-granting institutions held a total of 806.7 million volumes of books, bound serials, and government documents. Excluding duplicate titles within a library's collection, there were 449.2 million titles at the end of FY 1996 (table 6).

- Of the total volumes, almost half (45 percent or 352.1 million) were held at the 125 institutions categorized under the 1994 Carnegie Classification as Research institutions (table 8 and figure 8). Research institutions have about 23 percent of FTE students. In contrast 6 percent of volumes were at 2- year Associate of Arts degree-granting institutions, which have 30 percent of FTE students (figure 8).

- Descriptively speaking, over the years since 1974, the number of volumes held in academic libraries per FTE student increased. In 1974 there were 57 volumes held per FTE student and in 1996 there were 81 volumes per FTE student (table 7). The number of volumes held per FTE student varied widely among different types of institutions, ranging from 17 volumes per FTE student in public 2-year Associate of Arts degree-granting institutions to 268 volumes per FTE student in private Research I and II institutions (table 8).

- The number of volumes added to library collections per FTE student declined from 3.0 in 1974 to a low of 1.9 in 1990. In 1996, the number of volumes added per FTE student was 2.1 (table 7 and figure 7).

Staff

- A total of 95,580 FTE staff worked in academic libraries in 1996. Of the total, just under one-third (27,268 or 29 percent) were librarians or other professional staff (appendix table B-8). This group included staff members doing work that required professional education (the master's degree or equivalent) in the theoretical and scientific aspects of librarianship. Professional staff also included staff not trained as professional librarians, who have equivalent education and training in related fields.

- Student assistants, employed on a temporary basis, were 29 percent of total academic library staff. The largest percent of academic library staff were classified as other paid staff,

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comprising 42 percent of all academic library staff. Other paid staff includes all staff not categorized as library professional staff or student assistants (appendix table B-8 and figure 10).

- Based on counts of higher education staff collected since 1976, it appears that library staff growth has not kept pace with that experienced among the total postsecondary education staff. Overall, since 1976, total library FTE staff has increased by 18 percent, while the total FTE staff in postsecondary degree-granting institutions has increased by about 38 percent (figure 11). The total number of library staff, including student assistants, declined by about 1.3 percent from 1990 to 1996 (table 10).

- In 1996, there were 9.6 FTE total library staff (including student assistants) per 1,000 FTE students (table 10). The institutional median number of library staff per 1,000 was similar (8.7 FTE) (table 10). Excluding student assistants, the median was 5.8 FTE library staff per 1,000 students (appendix table B-13c).

Expenditures

- In 1996, operating expenditures for libraries at the 3,408 postsecondary degree-granting institutions totaled $4.30 billion (table 11). Half the total expenditures went to salaries and wages.

- Just over one-third (35 percent) of expenditures went to information resources related to the library collection. This category includes expenditures for books and other printed materials (e.g., cartographic materials), current serials, microforms, audiovisual materials, computer files and search services, document delivery and interlibrary loan, and other collection expenditures. An additional 16 percent of expenditures were for furniture and equipment (e.g., book shelving, security equipment), computer hardware and software, bibliographic utilities (e.g., On-Line Catalog Library Corporation (OCLC); Social Science Abstracts), and preservation costs (figure 12).

- Among information resources expenditures, the largest category of expenditures was current serial subscriptions, accounting for fully half of the information resources-related expenditures (figure 13).

- Academic library expenditures per FTE student in constant 1996 dollars were $445 in 1974 and $431 in 1996. Low points in expenditures per FTE student were reached in 1981 ($372) and 1990 ($392). Between 1990 and 1996 expenditures per FTE student increased by about 4 percent in constant dollars (table 12 and figure 14).

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- Considering academic library expenditures as a part of an institution's total Education and General (E&G) expenditures for a given year, there seems to be a small steady decline in the percentage of total E&G spent on libraries over the period since 1974. The percentage of E&G expenditures for academic libraries was 3.9 percent in 1974 and 2.8 percent in 1996 (figure 15).

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The Status of Academic Libraries, 1996

Introduction

Two of the national education goals for the year 2000 emphasize the important roles played by resources and staff efforts of academic libraries. The nation's fourth education goal, which is concerned with the ongoing need for access to learning resources for teachers and faculty members, and the nation's sixth education goal, which speaks of lifelong learning, both stress the importance of maintaining and improving the nation's academic libraries (National Education Goals Panel, 1994). This report presents a description of the status of academic libraries in 1996, a time of rapid technology-related change and increased introduction of electronic services (Lynch, 1996).

The report presents detailed tabulations for 1996 and historical comparisons with previous years, with a focus on comparisons since 1990. In 1996, the Academic Library Survey (ALS) was a part of the Integrated Postsecondary Education Data System (IPEDS) of the United States Department of Education's National Center for Education Statistics (NCES).

IPEDS is the U.S. Department of Education's vehicle for collecting data from all postsecondary institutions in the United States. Other surveys included within IPEDS are Institutional Characteristics, Fall Enrollment, Completions, Finance, Faculty Salaries, and Fall Staff. The data in this report come from the postsecondary degree-granting institutions in the United States.

Topics Covered in the Report

Consistent with previous Academic Library reports from the 1990s (Williams, 1993; Rossi and Daughtery, 1997; Cahalan and Justh, 1998), this report focuses on several key library indicators. These indicators, however, have been expanded over previous reports in order to reflect increased attention to library electronic services. Many of the indicators chosen for the report encompass those developed by the Association of Research Libraries (ARL). This group has developed a series of 30 benchmark indicators (Association of Research Libraries Indicators—see appendix C for a listing of the indicators). Many of the ratios forming the indicators (e.g., volumes per student or total expenditures per student) can be developed from information collected in the ALS, and we have included several of them in this report. In addition, we report on several other data items included in the ALS questionnaire.

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Definitions of Key Terms Used in the Report

We list below some key concepts, referred to in this document, with brief definitions.

Library Definitions

- An *Academic library* is defined as an entity in a postsecondary institution that provides all of the following:
  - organized collection of printed or other materials, or a combination thereof;
  - a staff trained to provide and interpret such materials as required to meet the informational, cultural, recreational, or educational needs of clientele;
  - an established schedule in which services of the staff are available to clientele; and
  - the physical facilities necessary to support such a collection, staff, and schedule. This definition includes libraries that are part of learning resource centers.
- *Branch libraries* are auxiliary library service outlets with quarters separate from the central library that houses the basic collection. The central library administers the branches. Libraries on branch campuses that have separate NCES identification numbers are reported as separate libraries.

Library Services

- *Electronic services* include Internet access, reference services by e-mail, full-texts of periodicals and academic course reserve materials available electronically, and electronic library indexes (such as citation indexes).
- *General and reserve circulation.* General circulation includes initial charging out of items, either manually or electronically, by patrons. The count also includes renewals of items, each of which is a circulation transaction. Reserve materials include those items that have been removed from circulation and set aside so they could be available for a certain course or activity.

- *Interlibrary loan transactions* are the number of filled requests for materials provided to other libraries or received by the library from another library. This includes both originals and copies and materials sent by electronic submission.
- *Reference transactions (including computer searches)* are information contacts that involve the knowledge, use recommendation, interpretation, or instruction in the use of one or more information sources by a member of the library staff. Information sources may include printed (e.g., book volumes) and non-printed materials (e.g., microforms) and machine-readable databases (e.g., those on CD-ROMS). The transaction may include providing direction to services outside the library.
- *Number served in presentations to groups* is the number of individuals served in presentations that were sponsored by the library and planned in advance. The presentation may cover instruction in library use, or cultural, recreational or educational presentations. Presentations given off the library site are included as long as they are sponsored by the library.
- *Gate count of visitors to library per typical week* is the number of persons who physically enter library facilities over the course of a week. A single person can be counted more than once.
- *Public service hours* is the number of hours the physical facility is open for service for both the main library and its branches.

Library Collections

- *Volumes of printed matter* is the number of volumes of any printed, mimeographed, or processed work that has been included in the library's catalogs, including those electronically transmitted (e.g., downloaded) from other sources into the library catalog.
- *Serial subscriptions* include paid and unpaid serials (e.g., *Journal of Education Psychology*), including government documents issued as serials (periodically). It excludes microforms, audiovisual materials (e.g., videos), and machine-readable materials.
- *Cartographic materials* represent the Earth (in whole or part) or any celestial body at any scale. They include graphic materials for viewing without sound. Examples are art originals, prints, reproductions, slides, photographs, posters, and films without sound.
- *Sound recordings* are audio items that are stored mechanically or electronically, or both.
- *Films and video materials* include films produced in a variety of sizes; video materials include videotapes and laser disks and include government documents in this medium.

- *Computer files* include materials such as CD-ROMS, magnetic tapes, and magnetic disks that are processed by a computer or similar machine. Examples are U.S. Census data tapes or electronic journals. Bibliographic records that are used to manage the collection are excluded. Government documents are included.
- *Other materials* include any items not already classified under a preceding category.

Library Staff

- *Full-time equivalent (FTE) staff* is the number of filled or temporarily vacant full-time equivalent (FTE) library positions. Part-time work is totaled and converted to FTE based on the number of hours the library uses as a full-time workweek.
- *Librarians and other professional staff* are staff members doing work that requires professional education (the master's degree or equivalent) in the theoretical and scientific aspects of the library profession. The group also includes staff not librarians, who perform professionally equivalent tasks and have education and training in related fields.
- *Other paid staff* is all other paid staff, except student assistants. This category includes clerical and technical staff but excludes maintenance and custodial staff.
- *Student assistants* are students employed on an hourly basis to work on library-related tasks. This group includes both students whose wages are paid from funds under the library budget and those paid from other budgets, including the College Work-Study Program.

Library Expenditures

- *Salaries and wages* are expenditures for full-time and part-time salaries and wages before deductions.
- *Information resources* includes expenditures for the following materials:
  - books, serial backfiles (such as bound journal volumes), and other print materials;
  - current serials (e.g., periodicals, newspapers, annuals, proceedings and transactions of societies);
  - microforms (photographic reproductions of textual, tabular, or graphic materials reduced in size so that they can be used only with magnification);

- audiovisual materials that are displayed by visual projection or magnification or through sound reproduction or both; and
- computer files and search services, materials considered part of the collection whether purchased or leased, such as CD-ROMs, magnetic tapes and magnetic disks that are designed to be processed by a computer or similar machine. Examples are U.S. Census data tapes or electronic journals, and reference tools (e.g., dictionary) on CD-ROM.

- *Document delivery and interlibrary loan related expenditures* include fees paid for photocopies, costs of telefacsimile transmission, royalties and access fees paid to bibliographic utilities.
- *Other expenditures* include preservation, furniture and equipment, computer hardware and software to support library operations, and bibliographic utilities not elsewhere reported.

Other Terms Used in the Report

- *Full-time equivalent student* is calculated based on the number of full-time students enrolled plus one-third of the number of part-time students.
- *Education and general expenditures* are the total expenditures for operating the institution, and include expenditures for instruction, administration, student services, research, libraries, public services, operation and maintenance of plant, scholarships and fellowships, and mandatory transfers (money legislatively earmarked for postsecondary education).
- *Carnegie classification* is a grouping of postsecondary degree-granting institutions into categories developed by the Carnegie Foundation for the Advancement of Teaching. The categorization is based on a combination of levels of degrees awarded, and research funding levels. The Carnegie classification categories used are as follows: Research I and II; Doctoral I and II; Master's I and II; Baccalaureate I and II; Associate of Arts; and Specialized.[1] For table presentation, "level I" and "level II" of the Carnegie classifications were combined. In addition, there were 316 institutions that did not have a Carnegie classification and these were put into a "not classified" category (The Carnegie Foundation for the Advancement of Teaching, *A Classification of Institutions of Higher Education, 1994 Edition,* Princeton, NJ).

[1] Specialized institutions offer degrees ranging from the bachelor's to the doctorate, at least 50 percent of which are in a single specialized field, e.g., theological seminaries, Bible Colleges, and other institutions offering degrees in religion, and schools of art, music, and design.

Coverage and Response

Of the 3,792 postsecondary degree-granting institutions, there were 172 institutions that did not have their own library but shared a library with one or more of 96 other institutions. These institutions were excluded from the survey. There were also 212 institutions that were found to be ineligible to participate because they did not have an academic library as defined by the survey. Thus, in 1996, there were 3,408 postsecondary degree-granting institutions with academic libraries in the 50 states and the District of Columbia.

In 1996, there were 3,408 postsecondary degree-granting institutions with academic libraries in the 50 states and the District of Columbia

Academic Library Survey Response Rates. The response rate for the 1996 Academic Library Survey was 94 percent. Item response rates ranged from a high of 92 percent for the questionnaire item on operating expenditures for books to 67 percent for the item on numbers of government document titles held at the end of the year. Any items discussed in the text with less than 70 percent response rate are noted. Appendix tables A-1 to A-3 present further information on overall and item response rates. Except where noted, data were imputed for nonresponse.

Coverage and Time Frames. The report covers libraries in higher education institutions in the 50 states and the District of Columbia (D.C.). The focus of the report is on 1996 data with detailed comparisons to 1990. We also include selected historical trend comparisons with earlier reports in the series back to 1974. The Academic Library Survey has been conducted by NCES since 1966 at irregular intervals. Beginning with the 1990 survey, the Academic Library Survey has been conducted on a 2-year cycle. Although there have been changes in the questionnaire over the years, the series is generally considered to be continuous. Data collected since 1974 have been summarized and reported in the *Digest of Education Statistics* in various years (e.g., table 412, 1996). To provide an historical context for this report, we have drawn upon these data published previously in the *Digest*.

The Academic Library Survey response rate was 94.2 percent in 1996

For the 1996 data collection, library staff data were reported for fall 1996. Operating expenditures and library collections were reported for fiscal year (FY) 1996. Library circulation and interlibrary loans are also for FY 1996, and other library services are for a typical week in fall 1996. FY 1996 is defined as any 12-month period between July 1, 1995 and September 30, 1996, which corresponds to the institution's fiscal year. In addition, new questions about electronic services available were added to the data collection instrument.

To ensure complete coverage, imputed data are used in reporting all 1996 data. However, the percent change comparisons with 1990 data were calculated using only those institutions that responded to the item in both 1990 and 1996. These comparisons are made only for items in which 70 percent or more responded in both years.

Classifications Used in the Report

The tables and charts in this report present the data by control (library at public, private institution); size of FTE student enrollment (less than 1,500; 1,500 to 4,999; 5,000 or more); and the 1994 Carnegie Classification (see definition above). Appendix B (tables B-1 to B-13) includes tabulations of data by highest offering, a categorization based on the IPEDS classification of the highest degree awarded by the institution (doctor's, master's, bachelor's, and less than 4-year).

Methodological Caution

This is a descriptive report that focuses on information from a census of academic libraries in 1996 and includes summary information from previous similar census counts from other years. The presentation of numbers, proportions, and percentages is descriptive only of libraries in the period referenced.

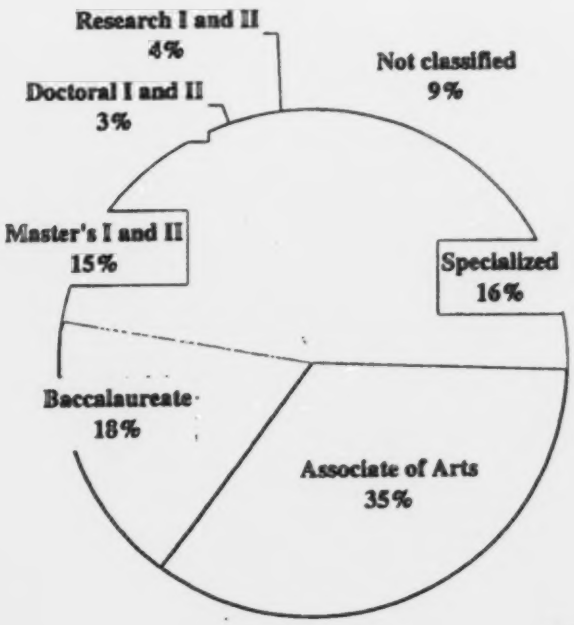
Appendix A contains methodological information for the 1996 survey. Appendix B contains detailed tables. Appendix C is the Association of Research Libraries (ARL) benchmark listing and appendix D is a copy of the 1996 questionnaire.

Number and Diversity of Academic Libraries

The term "academic library" includes a diverse group of libraries that share the mission of degree-granting postsecondary education in very different settings with a wide range of institutional histories and resource levels. In 1996, just over half the 3,408 academic libraries were in private institutions (54 percent), and slightly less than half (46 percent) were in public institutions (table 1). The distribution of academic libraries by institution type/mission mirrors that of the distribution of postsecondary degree-granting institutions. By Carnegie Classification, Associate of Arts institutions had the largest number of academic libraries (1,182), with about one-third (35 percent) of the total. Approximately one-sixth of academic libraries were in each of the following: Baccalaureate I and II institutions (18 percent, or 599), Specialized institutions (16 percent, or 558), and Master's I and II (15 percent, or 518). Only 4 percent (125) of academic libraries were at Research I and II institutions, and another 3 percent (110) were at institutions classified as Doctoral I and II (figure 1 and table 1).

The largest proportion of academic libraries (35 percent) were at Associate of Arts granting institutions

Figure 1.—Distribution of academic libraries by Carnegie Classification of institutions: fall 1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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Historical Growth

In 1967, there were 2,145 academic libraries reported (Beazley, 1979). By 1974, there were 2,972 academic libraries reported; and in 1987, there were 3,438 (NCES, *Digest of Education Statistics, 1996*, table 412). There were 3,274 libraries in 1992, 3,303 in 1994, and 3,408 in 1996. The number fluctuates, in part, based on the manner in which branch campuses were classified by the institution in each of the years, so it is not possible to conclude that there were more academic libraries in 1987 than in 1996.

Branch Libraries

In 1996, the 3,408 academic libraries reported a total of 2,532 branches. About 28 percent (945) of the academic libraries reported having branch libraries. In 1996, among those having branches, the mean per library was 2.7 and the median was 1. By Carnegie Classification, the percentage having branches ranged from 16 percent in "Not classified" institutions and 18 percent in Specialized institutions to 94 percent in Research I and II institutions. Among those having branches, the mean number ranged from 1.7 in "Not classified" and Baccalaureate to 8.2 in Research institutions (table 1).

Just over one-fourth (28 percent) of academic libraries have branch libraries

Table 1.—Number of libraries, number with branch libraries and mean number of branches among academic libraries having a branch by institutional characteristics: fall 1996

Institutional characteristic	Total libraries		Libraries with branches		Branches	
	Number	Percent	Number	Percent	Number	Mean
Total	3,408	100%	945	27.7%	2,532	2.7
Control						
Public	1,573	46.2	503	32.0	1,409	2.8
Private	1,835	53.8	442	24.1	1,123	2.5
Carnegie Classification						
Research I and II	125	3.7	117	93.6	956	8.2
Doctoral I and II	110	3.2	81	73.6	244	3.0
Master's I and II	518	15.2	157	30.3	288	1.8
Baccalaureate I and II	599	17.6	138	23.0	237	1.7
Associate of Arts	1,182	34.7	299	25.3	538	1.8
Specialized	558	16.4	102	18.3	181	1.8
Not classified	316	9.3	51	16.1	88	1.7

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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Academic Library Services

The introduction and expansion of electronic technology in academic libraries is greatly changing library services and operations. A new section on the 1996 Academic Library Survey (ALS) form was designed to capture information on the availability of a variety of library electronic services. We first discuss this information and then the more traditional measures of library service, such as circulation, library loans, reference transactions, and gate count.

Electronic Services

The 1996 ALS included over a dozen new categories related to electronic services. These services are:

- electronic catalogs (e.g., electronic listing of the libraries holdings);
- electronic indexes (e.g., citation indexes) and reference tools (e.g., encyclopedias);
- electronic full-text periodicals (e.g., academic journals);
- electronic full-text course reserves (e.g., copies of unpublished papers used for a course);
- electronic files other than the catalog (e.g., Statistical Abstract access);
- Internet access (e.g., access to the Internet from an account assigned to the library);
- library reference service by e-mail (e.g., purchased or acquired services to obtain reference information beyond that obtained in catalogs);
- capacity to place interlibrary loan or document delivery requests electronically;
- electronic document delivery by the library to patron's account or address;
- computers not dedicated to library functions for patron use inside the library;
- computer software for patron use inside the library (e.g., city street locating map software);
- technology in the library to assist patrons with disabilities (e.g., work stations for the physically disabled); and
- instruction by library staff on use of Internet resources.

For each service, information was obtained on whether the library provided the service from inside the library and from elsewhere on campus. Information was also obtained on whether the service was available from off-campus and to whom access was given—to the primary clientele (students and faculty) only, or to others who were not enrolled or employed at the institution. Before beginning

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this discussion, we note that the use of electronic services is changing rapidly in libraries. The section below reports on the status of these services in 1996.

Electronic Reference Tools. Electronic reference databases include indexing and abstracting services, encyclopedias, dictionaries, directories, and statistical compilations. By 1996, more than 9 of every 10 institutions (91.2 percent) offered electronic indexes and reference tools within the library (figure 2 and table 2). At roughly half the institutions, users could access the services from elsewhere on campus (53 percent) or—in the case of primary clientele—from off campus (43 percent). The proportion of institutions providing reference access from outside the library ranged considerably by type of institution. Nearly all Research institutions (98 percent) provided off-campus reference services for primary clientele, while just under 40 percent of Associate of Arts libraries did so. Less than one in five institutions (19 percent) provided off-campus access for individuals other than primary clientele (table 2 and appendix B, table B-12).

Electronic Catalogs that list library holdings might consist solely of the library's Online Public Access Catalog (OPAC) or of the library's OPAC along with other databases. In 1996, four out of five academic libraries (80 percent) made available an electronic catalog that included the library's holdings to clients inside the library, and 59 percent made the electronic catalog available to primary clientele off campus. In 1996, just over half (56 percent) made an electronic catalog available to others off-campus (table 2).

Table 2.— Percentage of institutions offering various electronic services by type of access: 1996

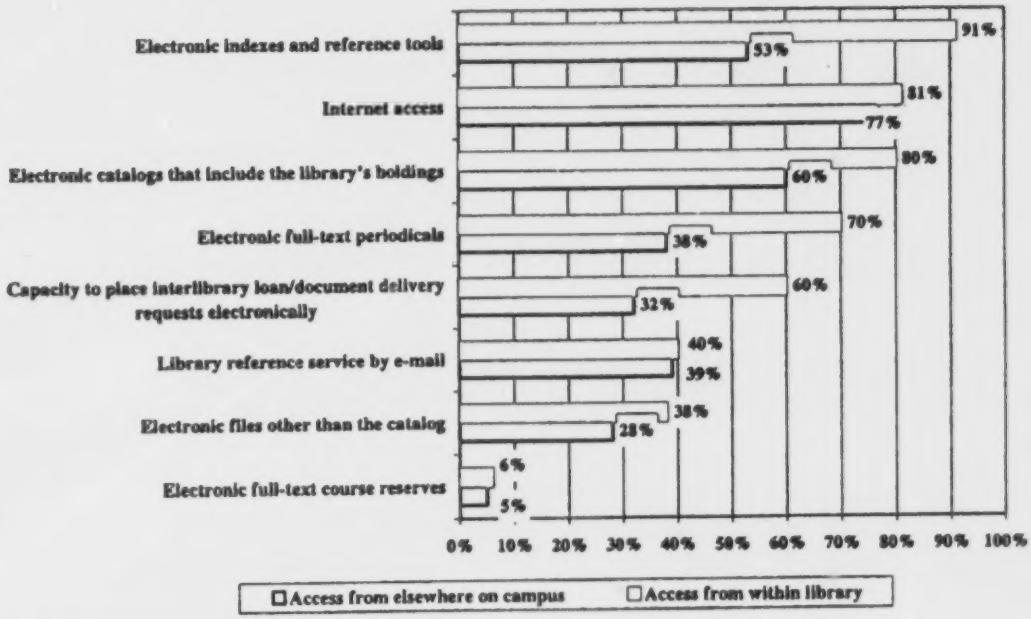
Electronic service	Access from		Access off campus	
	Within library	Elsewhere on campus	Primary clientele	Others
Electronic indexes and reference tools	91.2%	52.5%	43.0%	18.5%
Internet access	80.9	76.9	50.4	23.9
Electronic catalogs that include the library's holdings	79.9	59.9	58.5	55.5
Electronic full-text periodicals	69.7	38.1	31.8	11.0
Capacity to place interlibrary loan/document delivery requests electronically	60.0	31.6	30.6	11.5
Library reference service by e-mail	40.1	38.8	36.4	22.5
Electronic files other than the catalog	38.1	28.1	26.4	24.0
Electronic full-text course reserves	6.3	5.1	4.5	1.7

NOTE: Unlike all other data items, data items on electronic services were not imputed. All electronic services items had above 80 percent response.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Electronic Full Text. Electronic journals consist of original material available only in electronic form—either for free (via a link to a gopher or Web site) or for a subscription fee—and material previously published in hard copy and now available electronically for a subscription or access fee. Nearly 70 percent of academic libraries provided users within the library electronic access to the full-text of some periodicals in 1996. Public institutions (84 percent) seemed to provide this access more frequently than did private institutions (57 percent). Access from outside of the library was available less frequently at all types of institutions, whether by users on-campus (38 percent of institutions), by primary clientele off campus (32 percent), or by others off campus (11 percent) (table 2 and appendix B, table B-12).

Figure 2.—Percentage of academic libraries having selected types of electronic services available from within library and elsewhere on campus: fall 1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Reserve Materials. Overall in 1996, the percentage of all academic libraries providing electronic access to full-text of course reserves was 6 percent. This small percentage may be related to the burden involved, copyright concerns, or because the concept was relatively new. Thirty-two percent of Research institutions and 18 percent of Doctoral institutions reported electronic access to the full text of course reserves (table 2 and appendix B, table B-12).

Internet Use. Users can access the Internet in a variety of ways, including via telnet, FTP (file transfer protocol), e-mail, gopher, and WWW (World Wide Web). In the 1996 ALS survey, 81 percent of institutions reported the provision of Internet access from within libraries, and nearly as many cited its availability from elsewhere on campus (77 percent) (table 2). Depending on the type of institution, from two-thirds (68 percent of "not classified" institutions) to almost all (99 percent of Research I and II institutions) offered Internet access from the library (appendix B, table B-12). Off-campus access to the Internet was possible by primary clientele at half the institutions (50 percent) and by others at one-fourth of the institutions (24 percent) (table 2). Along with Internet access, library staff at three-fourths of the institutions (75 percent) offered instruction on the use of Internet resources (table 3).

Institutions also supplied computer hardware and software for use inside the library for non-library purposes. Computer software might include text-only CD-ROMs, multimedia CD-ROMs, and software programs. More than 6 of every 10 institutions provided computers that were not dedicated to library functions (63 percent) and computer software (61 percent) (table 3).

Electronic Support Services. By 1996, libraries had integrated electronic capabilities into their support services. At 60 percent of institutions, users could place interlibrary loans or document delivery requests electronically from within the library. About half as many institutions (32 percent) enabled on-campus users outside of the library to make such requests (appendix B, table B-12). The ability to deliver the documents electronically to patrons' accounts or address was less common. Approximately one of every six institutions (17 percent) offered that service in 1996 (table 3).

Table 3.—Percentage of institutions with selected electronic services, by institution control, size, and Carnegie Classification: fiscal year (FY) 1996

Institution characteristic	Instruction by library staff on use of Internet resources	Computers not dedicated to library functions for patron use inside the library	Computer software for patron use inside the library	Technology in the library to assist patrons with disabilities	Electronic document delivery by the library to patron's account
All	75.4%	63.4%	60.5%	42.1%	16.5%
Public	82.3	62.8	58.0	62.0	19.0
Private	69.1	64.0	62.7	23.8	14.2
Size (FTE enrollment)					
Less than 1,500	65.9	65.3	64.8	23.4	12.7
1,500-4,999	82.3	57.8	54.4	52.1	17.3
5,000 or more	91.9	67.7	58.3	80.8	26.4
Carnegie Classification					
Research I and II	100.0	81.5	67.2	90.8	33.3
Doctoral I and II	97.1	70.2	63.7	73.5	33.3
Master's I and II	90.9	63.2	59.0	58.6	22.4
Baccalaureate I and II	80.8	64.9	61.8	28.2	20.2
Associate of Arts	69.6	57.4	55.5	48.1	10.8
Specialized	60.3	68.7	67.0	17.7	12.0
Not classified	66.7	65.6	65.1	25.5	15.5

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Access to library reference service by e-mail was a feature offered at about 4 of every 10 institutions for users within the library (40 percent) and elsewhere on campus (39 percent). This service was available to users within the library in 85 percent of Research institutions and 28 percent of Associate of Arts institutions (table 2 and appendix B, table B-12).

A number of libraries have electronic services in place to help patrons with disabilities. Such services might include computer workstations for the physically disabled, reading machines for the blind, and TTY/TDD equipment for the deaf. In 1996, 42 percent of institutions reported that the library had technology to assist patrons with disabilities (table 3). Descriptively speaking, it appears that in 1996 such services were found more often at public institutions (62 percent) than at private institutions (24 percent), and at Research institutions (91 percent) than at Specialized institutions (18 percent).

Circulation, Library Loans, Reference Transactions, Hours of Service, and Presentations

As the movement toward "virtual libraries" and remote access continues, questions arise as to the impact these changes may have over time on the count of traditional library services such as circulation, reference transactions, frequency of visits to the library, and hours of service.

General circulation per FTE student was 18.5 transactions per year in 1996

Items Borrowed (Circulation)

In 1996, general circulation was 186.5 million transactions per year, and reserve circulation totaled 44.9 million transactions per year (table 4). General circulation per full-time-equivalent student was 18.5 transactions and reserve circulation per full-time equivalent student was 4.5 transactions (table 4).

Table 4.—Total number of services provided and number per full-time-equivalent (FTE) student by type of service: fiscal year 1996 and percent change from 1990

Service category	Total number in thousands 1996	Percent change 1990-96	Number per FTE enrollment 1996	Percent change 1990-96
General circulation transactions per year.....	186,545	12.8%	18.5	6.6%
Reserve circulation transactions per year.....	44,880	*	4.5	*
Loans to other libraries per year	9,431	*	1.0	*
Loans from other libraries per year.....	7,512	63.5	0.8	54.3
Reference transactions per week.....	1,871	-10.5	0.2	-15.3
Served in presentations to groups per year ...	7,388	*	0.7	*
Visits to library (gate count) per week.....	16,456	*	1.6	*

*Less than 70 percent response in either 1990 or 1996 or both years.

NOTE: Totals reported for 1996 include imputed data to account for nonresponse. Calculations of percent change include only those institutions reporting in both 1996 and 1990 and are reported only for variables in which 70 percent or more of libraries reported for the item in both 1990 and 1996. FTE student is calculated by taking one-third of part-time enrollment and adding the amount to full-time enrollment. Loans made to other libraries are higher than loans received from other libraries because loans are sometimes made to entities other than academic libraries such as public libraries or libraries sponsored by the government.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1990 and 1996"; and "Fall Enrollment Surveys, 1989 and 1995."

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Change in General Circulation Transactions Since 1990. When the set of institutions reporting in both 1990 and 1996 are compared, there was an increase of 13 percent in general circulation over the period. General circulation per FTE student increased 7 percent between 1990 and 1996 (table 4).

Differences in General Circulation Transactions by Institution Type. Descriptively, general circulation per FTE student varies considerably by institution type, ranging from 8.1 in Associate of Arts granting institutions to 35.5 in Specialized and 32.4 in Research I and II institutions (table 5). Circulation per FTE student was higher in private than public institutions. Circulation transactions per FTE student were 23.5 in private institutions and 16.9 in public institutions (table 5).

Table 5.—General circulation per full-time-equivalent (FTE) student by Carnegie Classification: 1996

Institutional characteristic	General circulation per FTE in 1996		
	Total	Public	Private
Carnegie Classification			
All	18.5	16.9	23.5
Research I and II	32.4	30.6	39.2
Doctoral I and II	18.6	17.6	21.4
Master's I and II	15.4	15.6	14.8
Baccalaureate I and II	20.0	16.4	21.0
Associate of Arts	8.1	8.1	8.5
Specialized	35.5	36.3	35.2

NOTE: Data reported for 1996 include imputed data to account for nonresponse. FTE enrollment is calculated by taking one-third of part-time enrollment and adding the amount to full-time enrollment.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1990 and 1996," and "Fall Enrollment Surveys, 1989 and 1995".

Interlibrary Loans

While internal general circulation has increased modestly in recent years, interlibrary loans exhibit larger increases, perhaps reflecting the wider access to on-line library college catalogs, and the strategy of shared resources. The total number of items loaned through interlibrary loan was 9.4 million, and the number received was 7.5 million in 1996. The figures from the institutions reporting in both 1990 and 1996 indicate there was an increase of 64 percent in items borrowed from other libraries. Considered per FTE student, items borrowed increased 54 percent over the 6-year period from 1990 to 1996 (table 4).

Interlibrary loans received increased by 64 percent between 1990 and 1996

Ratio of Interlibrary Items Loaned to Items Borrowed. The total number of interlibrary loans received (7.5 million in 1996) was less than items loaned (9.4 million in 1996) because academic libraries also loan to nonacademic libraries (table 4). The Association of Research Libraries (ARL) has selected the "ratio of items loaned to items borrowed" as an indicator, and this is an example of how an indicator can vary considerably by type of institution. A ratio of 1 indicates that a library lends items at the same rate it borrows. A number greater than 1 indicates a library lends more items than it borrows. A number less than 1 indicates that a library borrows more than it lends.

Among those libraries having at least one item loaned and one item borrowed through interlibrary loan, the mean per institution ratio of items lent to items borrowed was 2.2. However, the median per institution was .96 (data not shown). This difference between the mean and the median reflects a very skewed distribution of the ratio across the different types of institutions. The mean ratio was 1.4 in Baccalaureate, Associate of Arts, and "not classified" institutions, was 1.9 in Research institutions, and was 6.0 in Specialized institutions (figure 3). As one might expect, institutions with specialized collections and large collections such as those at research institutions are more likely to be called upon to loan more than they borrow.

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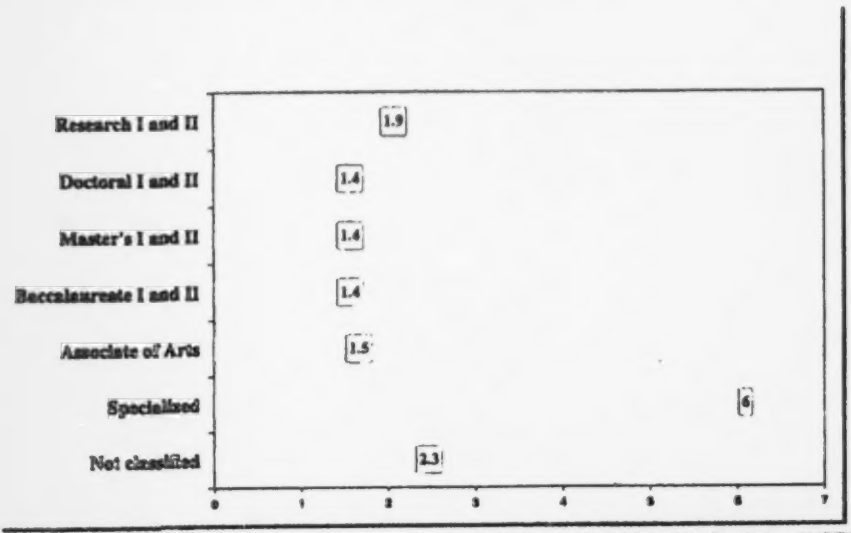
Figure 3.—Mean ratio of items loaned to items received through interlibrary loans by Carnegie Classification: 1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Reference Transactions

A total of 1.9 million reference transactions per week (including computer searching) were reported in 1996 (table 4). Fewer libraries reported information on reference transactions (82 percent) than on general or reserve circulation transactions (92 percent for general items and 85 percent for reserve items). Only about 60 percent of the libraries reported reference transactions in both 1990 and 1996, so it is not possible to include this item in the change comparisons over that period. Moreover, the interpretation of reference transactions may be inconsistent and is changing with the use of electronic searching for information. A descriptive comparison of the data for 1994 and 1996 for the total libraries indicates that this category declined slightly over the two-year period.

Visits to the Library (Gate Count)

Academic libraries reported a total gate count of 16.5 million visits per week or 1.6 visits per FTE student per week (table 4). As in past surveys, this item also had lower than average item response, with only 78 percent of libraries reporting on the gate count (compared to 82 percent average item response).

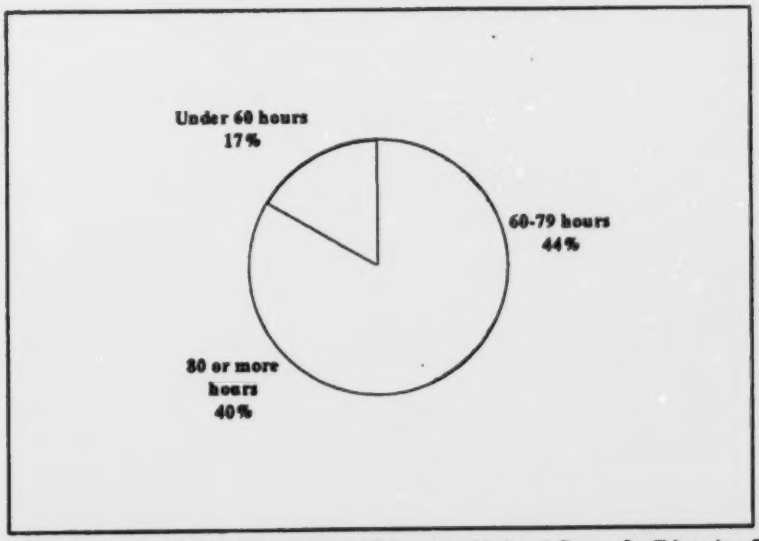
Public Service Hours

On average, academic libraries were open 76 hours per week in 1996. The mean hours ranged from 66 in Associate of Arts institutions to 107 in Research I and II institutions (figure 4). The largest number of academic libraries (44 percent) was open between 60 and 79 hours; another 40 percent, however, were open 80 or more hours. About 17 percent were open under 60 hours and 3 percent were open less than 40 hours (calculated from appendix B, table B-2).

Eighty institutions were open 120 or more hours per week and 31 were open more than 150 hours per week. This later group is very close to being open 7 days a week and 24 hours a day.

Figure 4.—Percentage distribution of academic libraries by public service hours per week and mean public service hours per week by Carnegie Classification: 1996

Distribution of public service hours



Mean public service hours per week

	Hours
All degree-granting postsecondary institutions	75.9
Research I and II	107.0
Doctoral I and II	97.0
Master's I and II	89.5
Baccalaureate I and II	86.0
Associate of Arts	65.5
Specialized	72.9

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

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Academic Library Collections

For some time, faced with the ever-mushrooming number of publications, academic librarians have spoken of the shift from acquisition to access and the "decline of ownership" (Battin, 1989; Kyrillidou, Maxwell, Stubbs, 1996). As we have seen in the discussion of growth in electronic services, with the development of new information age technology, the traditional notion of a library as a physical facility housing primarily paper-based materials has given way to a new image. The academic library is sometimes thought of as a range of services and collections made accessible through networks (Hughes, 1992). At the same time that the information technology revolution is occurring, new technology for information storing and processing have meant that the categories of materials making up a library collection have been expanded. While new electronic media are growing in importance, by the mid-1990s a small fraction of recorded information was actually available in electronic format. Moreover, there continue to be challenges in deciding which documents should be reformatted into electronic form and in providing continued access to these reformatted materials, as well as to those that will never be reformatted (Ardis, 1994).

The Academic Library Survey (ALS) questionnaire has been revised to reflect these changes over the years and continues to be revised. In 1996, the collection categories for which counts were obtained included:

- books and bound serials;
- government documents;
- current serials;
- graphic materials;
- sound recordings;
- film and video materials;
- computer files;
- linear feet of manuscripts and archives;
- microforms;
- cartographic materials; and
- other library materials.

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The number of titles a library holds in its collection was also collected for books, government documents not elsewhere classified, serials, microforms, sound recordings, films and video materials, and computer files. Beginning with the 1994 ALS survey, the term "computer files" replaced the term "machine readable materials" used in earlier surveys. Definitions of these items are presented in the introductory section of this report.

Library Collection Summary

Collections may be reported either in terms of counts of volumes or units (in which case some holdings may represent multiple copies of the same work) or in a manner in which each title is counted only once (referred to as unduplicated titles). In 1996, there were nearly 807 million volumes and 449 million unduplicated titles of books, bound serials, and government documents accessible through the academic library catalogs (table 6). In addition, there were 67 million government document titles not elsewhere classified.

Table 6.—Total number of library materials held and added per full-time-equivalent (FTE) student: fiscal year (FY) 1996

Category	Held at end of FY 1996		Added during FY 1996		Added as percentage of held
	Number in thousands	Per FTE student	Number in thousands	Per FTE student	
Volumes, units, and linear feet					
Books and bound serials	806,717	80.6	21,346	2.1	2.6%
Microform units	1,015,714	101.7	38,173	3.8	3.8%
Cartographic materials	33,880	3.4	658	0.1	1.9%
Graphic materials	95,860	9.6	1,952	0.2	2.0%
Manuscripts and archives, linear feet	4,311	0.7	223	0.0	5.2%
Titles					
Books and bound serials	449,179	44.8	12,333	1.2	2.7%
Government documents not reported elsewhere	67,314	6.7	*	0.3	4.1%
Current paid and unpaid serial subscriptions	5,709	0.7	274	**	4.8%
Microforms	181,203	18.1	7,331	0.7	4.0%
Sound recordings	9,206	0.9	337	**	3.7%
Films and video materials	3,916	0.4	421	**	10.8%
Computer files	983	0.1	158	**	16.1%

*Less than 70 percent reporting in 1996.

**Less than .1 per FTE student

NOTE: FTE student is calculated by taking one-third of part-time enrollment and adding the amount to full-time enrollment in 3,408 institutions having academic libraries.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

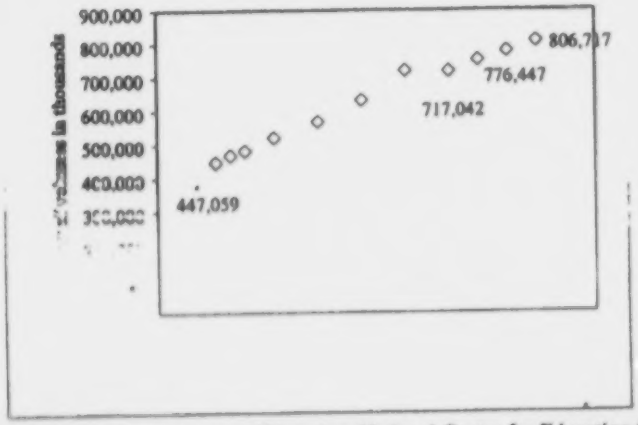
As in 1994, the category of materials with the most units was microforms, with 1,106 million units and 181 million unduplicated titles (table 6). A total of about 5.7 million paid and unpaid unduplicated serial subscriptions were reported. There were approximately 9.2 million titles of sound recordings, 3.9 million of films and videos, and 1.0 million of computer files.

Items Added as Percentage of Items Held. As in other ALS surveys in the 1990s, computer files and films and videos in 1996 continued to exhibit higher relative growth rates than other material collection categories (table 6). The ratio of items added to items held was 16 percent for computer files and 11 percent for films and video materials. In contrast, additions to other categories ranged from 3 percent for book titles to 5 percent for serial subscriptions.

Change in Volumes Held and Added

The number of book and bound serial volumes held and added during the year are statistics that have been consistently collected for a number of years and have had high reporting rates. In 1974, a total of 447 million volumes were counted in the nation's academic libraries and, by 1996, a total of 807 million volumes were counted (figure 5).

Figure 5.—Total number of books and bound serial volumes held in academic libraries: 1974 to 1996 (volumes in thousands)



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1996*, table 412; Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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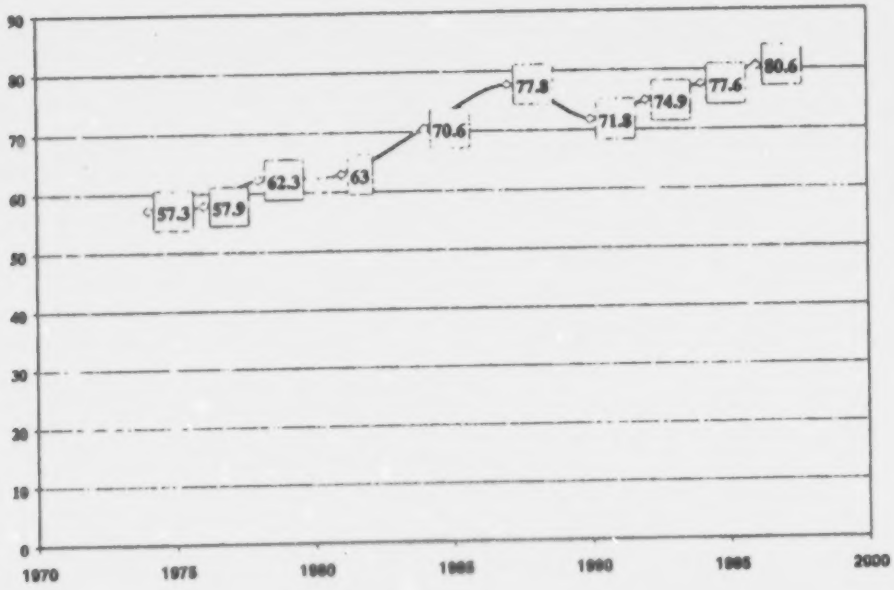
Increase Relative to Enrollment. Between 1974 and 1996, the total number of volumes counted as held in academic libraries increased by 80 percent while the total number of FTE students increased by 25 percent (8 million to 10 million). This difference is reflected in the number of volumes held per FTE student, which went from 57 to about 81 over the 22-year period (an increase of 35 percent). As figure 6 and table 7 show, most of the increase in volumes per FTE student occurred in the period prior to 1987. Since 1987, the number of volumes per FTE student has fluctuated between 72 and 81, in part a reflection of differences in FTE student counts.

Figure 6.—Number of volumes of books and bound serial volumes held per full-time-equivalent (FTE) student: 1974-1996



Between 1974 and 1996, the number of FTE students increased 25 percent and volumes increased by 80 percent

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1996*, table 412; Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

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Number of Volumes Added Per Year. The increase in the number of volumes held over time is the result of a rather steady number of volumes added each year rather than increases in the rate of additions. The number of volumes added each year shows little change over the 22-year period, ranging from 23.2 million in 1974 to a low of 19.0 million in 1990 (table 7). In 1996, 21.3 million volumes were added. The number added per FTE student declined between 1974 and 1990 going from a high of 3.0 in 1974 to a low of 1.9 in 1990 (table 7 and figure 7). In 1996, there were 2.1 volumes added per FTE student. [2]

The number of volumes added per year has not increased over the last 22 years

Table 7.—Number of books and bound serial volumes held and added per full-time equivalent (FTE) student, and number of serial subscriptions held: 1974-1996

Year	Volumes held		Volumes added		Serial subscriptions held
	Number in thousands	Per FTE student	Number in thousands	Per FTE student	Number in thousands
1974....	447,059	57.3	23,242	3.0	4,434
1976....	481,442	57.9	22,367	2.7	4,670
1978....	519,895	62.3	21,608	2.6	4,775
1981....	567,826	63.0	19,507	2.2	4,890
1984....	631,727	70.6	20,658	2.3	6,317
1987....	718,504	77.8	21,907	2.4	6,416
1990....	717,042	71.8	19,003	1.9	5,749
1992....	749,429	74.9	20,982	2.0	6,966
1994....	776,447	77.6	21,544	2.2	6,621
1996....	806,717	80.6	21,346	2.1	6,588

NOTE: Figures per FTE student for 1974 to 1992 were taken from the *Digest of Education Statistics, 1996*, table 412. The figures were calculated on the basis of total FTE students for the various years. FTE students are the number of full-time enrolled plus one-third of the part-time enrollment.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1996*, table 412; Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

[2] It has been suggested by a reviewer from the American Association of Research Librarians that one of the reasons volumes held is increasing is because of the availability/incorporation of government documents under volumes held.

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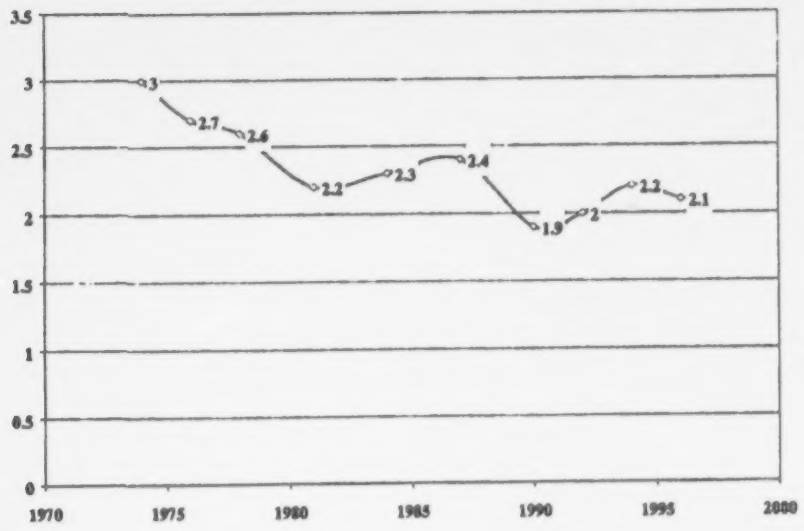
Figure 7.—Total number of books and bound serial volumes added per year in academic libraries per full-time-equivalent (FTE) student: 1974-1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1996*, table 412; and Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

Change Since 1990 in Volumes Held

A comparison of the set of institutions reporting in both 1990 and 1996 shows that overall the number of books and bound serial volumes in library holdings increased by 16 percent and the number per FTE student increased by 10 percent over the period (table 8). These figures suggest that overall, despite the growth of other media, the number of bound printed volumes held continued to increase at rates higher than that of enrollment. The rates of increases were highest among private Research I and II institutions and public Doctoral I and II institutions. These institutions had increases of 20 to 21 percent in total volumes and 17 percent in volumes per FTE student (table 8). However, increases were not observed for all types of institutions, especially those with increasing enrollments. For example, Associate of Arts institutions experienced a decline of 2.1 percent over the period between 1990 and 1996 in volumes held per FTE student.

Table 8.—Number of books and bound serial volumes held at end of fiscal year 1996, volumes held per full-time-equivalent (FTE) student, and percent change since 1990, by Carnegie Classification

Institutional characteristic	Volumes held at end of year		Volumes per FTE student				
	Number in thousands	Percent change 1990-1996	Number	Percent change 1990-1996	Lower quartile	Median	Upper quartile
Total	806,717	15.6%	81	9.5%	20	58	118
Public	469,864	15.3%	62	9.9%	16	32	64
Private	336,853	16.2%	137	7.5%	36	91	181
Research I and II	352,060	18.1%	154	17.0%	102	130	203
Public	227,670	16.5%	125	16.2%	92	118	145
Private	124,391	21.3%	268	16.8%	162	245	395
Doctoral I and II	89,204	18.0%	91	14.7%	61	86	123
Public	56,673	20.2%	78	16.7%	60	70	107
Private	32,531	14.0%	128	11.1%	85	107	156
Master's I and II	161,988	16.1%	69	10.1%	55	68	96
Public	110,891	15.4%	64	10.9%	51	64	81
Private	51,098	17.6%	83	6.9%	60	78	113
Baccalaureate I and II	98,134	11.4%	120	-0.3%	78	116	174
Public	11,299	10.9%	63	1.2%	48	63	88
Private	86,835	11.4%	136	-0.8%	87	130	186
Associate of Arts	52,372	6.4%	17	-2.1%	12	19	32
Public	48,229	7.1%	17	-1.5%	13	19	28
Private	4,143	*	26	-6.9%	6	18	58
Specialized	43,082	10.3%	117	0.4%	38	115	315
Public	11,025	7.0%	103	-5.4%	60	109	158
Private	32,057	11.5%	122	2.7%	36	118	373
Not classified	9,877	*	60	18.2%	9	27	100

*less than .05 percent

NOTE: Totals reported for 1996 include imputed data to account for nonresponse. Calculations of percent change include only those institutions reporting in both 1996 and 1990 and are reported only for variables in which 70 percent or more of libraries reported for the item in both 1990 and 1996. FTE student enrollment is calculated by taking one-third of part-time enrollment and adding the amount to full-time enrollment. Twenty-five percent of institutions fall into each quartile grouping. All institutions in the lower quartile were at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had 20 or fewer volumes per FTE student. Details may not sum to totals because of rounding.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1990 and 1996," and "Fall Enrollment Surveys, 1989 and 1995."

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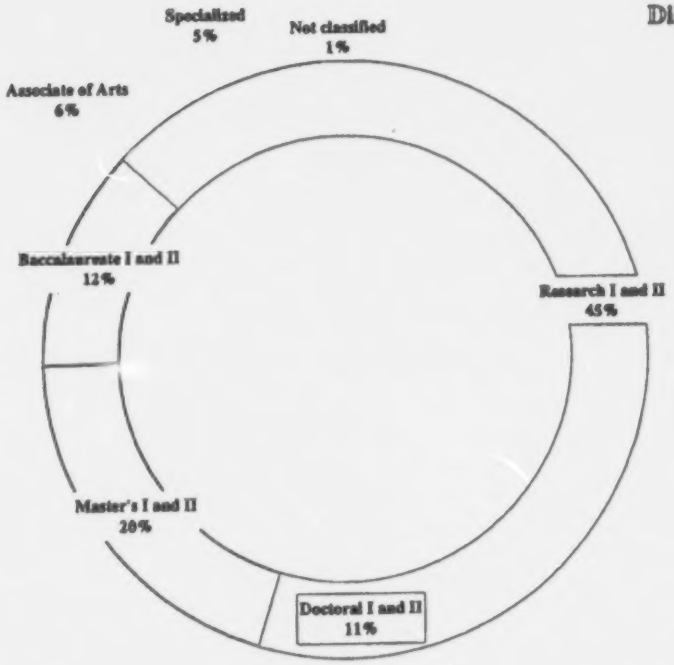
Distribution of Volumes of Books and Bound Serials by Type of Institution

Traditionally, research institutions have maintained the largest collections to serve the needs of graduate students and research faculty. Research I and II institutions enroll about 23 percent of the total FTE students, and they have about 45 percent of all volumes of books and bound serials held (figure 8). The Associate of Arts institutions, enrolling 30 percent of the FTE students, hold 6 percent of the volumes.

Figure 8.—Percentage distribution of volumes of books and bound serials held at the end of the year and distribution of full-time-equivalent (FTE) student enrollment by Carnegie Classification: 1996



Distribution of FTE student enrollment: 1996

All degree-granting postsecondary institutions	100%
Research I and II	23%
Doctoral I and II	10%
Master's I and II	24%
Baccalaureate I and II	8%
Associate of Arts	30%
Specialized	4%
Not classified	2%

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

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Differences in Volumes per FTE Student

In 1996, the overall number of book and bound serial volumes per FTE student was 80.6 and the median per institution was 58 (table 8). The numbers per FTE student exhibit a wide range by institution type, from 17 per FTE student in public Associate of Arts institutions to 268 in private Research I and II institutions (table 8). The median number of volumes per FTE student per institution ranged from 18 and 19 in public and private Associate of Arts institutions to 245 in private Research I and II institutions.

The number of volumes held per FTE student ranges from 17 in public Associate of Arts institutions to 268 in private Research I and II institutions

Number of Volumes per Institution and Academic Library Standards

The number of book and bound serial volumes held per institution in 1996 ranged from 61,164 volumes in institutions with less than 1,500 students to nearly a million (964,027 volumes) in institutions with 5,000 or more students (table 9). The 1995 edition of *Standards for College Libraries* prepared by the Association of College and Research Libraries (ACRL)/College Library Section (CLS) Standards Committee gives a formula for estimating the number of volumes needed. This formula suggests that a basic collection should have at least 85,000 volumes and that there be an additional 15 volumes per FTE student and an additional 100 volumes per FTE faculty. Furthermore, the formula states that there should be 350 volumes per undergraduate major and minor and additional allowances for each master's program (6,000 volumes), each specialist program (3,000 volumes), and each doctoral field (6,000 volumes).

Library standards for 4-year colleges recommend a basic collection of 85,000 volumes with additional volumes based on enrollment, faculty, number of majors, and types of degrees awarded

Thus, for example, a baccalaureate institution with 1,000 FTE undergraduates, 10 major fields, and 50 faculty should have about 108,000 volumes. A master's level institution with 10,000 FTE students, 250 faculty, 15 undergraduate majors, and 8 master's programs should have about 313,000 volumes. A doctoral degree-granting institution with 20,000 FTE students, 350 faculty, 15 undergraduate majors, 10 master's programs, and 8 Ph.D. fields should have about 633,000 volumes. One can see from the descriptions note above, and the numbers in table 9, that smaller colleges appear to meet the standard infrequently, while Research universities seem to easily exceed the standard. For example, institutions with less than 1,500 students had 61,164 volumes per institution and a median number of volumes per institution of 35,166 (Table 9)—considerably less than the 108,000 volumes that might be recommended based on the standards. In contrast, Research Institutions had a median of 2.3 million volumes—far exceeding the sample recommendation.

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The standards for community colleges awarding associate degrees are contained in the publication *Standards for Community, Junior, and Technical College Learning Resource Programs*, published in 1994 and prepared by a joint committee of the Association for Educational Communications and Technology (AECT) and the ACRL. The recommendations for number of volumes are directly linked to institution enrollment size, and range from 30,000 volumes for institutions with under 1,000 FTE students to 170,000 volumes for those with 17,000 to 19,000 FTE students. One can see from table 9 that the Associate of Arts institutions with 44,308 volumes held per institution, and a median of 37,492 volumes held just exceed the minimum standard for the smallest category of institutions, those with 1,000 FTE students. The average FTE enrollment of Associate of Arts institutions in 1996 was 2,539 (calculated from appendix A table A-4 and table 1).

Library standards for two-year colleges recommend a minimum of 30,000 volumes for institutions with under 1,000 FTE enrollment and 170,000 for those with FTE enrollments of 17,000-19,000

Table 9.—Number of books and bound serial volumes per institution and percentage distribution of volumes held by institution control, size, and Carnegie Classification: fiscal year (FY) 1996

Institution characteristic	Total number of libraries	Total volumes at end of year in thousands	Per institution	Median per institution	Percent of total volumes held
All	3,408	806,717	236,713	69,965	100%
Control					
Public	1,573	469,864	298,706	66,245	58.2%
Private	1,835	336,853	183,571	72,549	41.8%
Size (FTE students)					
Less than 1,500	1,839	112,481	61,164	35,166	13.9%
1,500-4,999	1,014	156,309	154,151	88,354	19.4%
5,000 or more	558	537,927	964,027	484,236	66.7%
Carnegie classification					
Research I and II	125	352,060	2,816,481	2,301,269	43.6%
Doctoral I and II	110	89,203	810,944	724,470	11.1%
Master's I and II	518	161,988	312,719	241,368	20.1%
Baccalaureate I and II	599	98,134	163,830	119,093	12.2%
Associate of Arts	1,182	52,372	44,308	37,492	6.5%
Specialized	558	43,082	77,207	45,568	5.3%
Not classified	318	9,877	31,061	8,754	1.2%

NOTE: Details may not sum to totals because of rounding.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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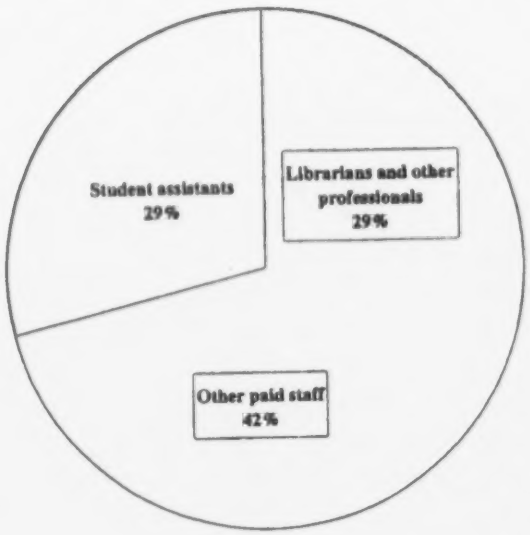
Academic Library Staff

The development of electronic information databases and automation of many library technical functions have resulted in the redefining of a profession and a change in the composition of staff in academic libraries. Some tasks, previously handled by professional librarians, have been assigned to newly emerging support staff. At the same time, the evolution of information technology requires sophisticated librarians who can provide enhanced information services (Oberg, 1992; Park and Riggs, 1991; Cravey, 1991). Librarians have always served as the link between information resources and consumers of information. The academic librarian in the information age may spend more time instructing students in the skills of self-selecting and reviewing information from an ever-expanding information base. In addition, the library and librarians will maintain the essential infrastructure to accommodate the continuously evolving information environment. Figure 9 presents the distribution of academic library staff by type of staff in 1996.

Figure 9.—Percentage distribution of academic library full-time-equivalent (FTE) staff by type of staff: 1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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Distribution of Full-Time-Equivalent (FTE) Library Staff by Type

Academic libraries employed about 95,580 FTE staff in 1996.[3] Of the total FTE library staff, 29 percent were librarians or other professional staff, and the same percentage was student assistants. The category "other paid staff" comprised the largest proportion of academic library staff, 42 percent (figure 9).

The proportion of FTE library staff who are librarians and other professional staff was similar across institution type and control (see appendix B table B-8). For example, the proportions were 27 percent in Research I and II institutions, 33 percent in Specialized institutions; and 27 percent in public institutions and 30 percent in private institutions.

Full-Time-Equivalent (FTE) Staff per 1,000 FTE Students

While the relative distribution of staff between professional, non-professional, and student assistants was similar by type of institution, the number of FTE library staff per 1,000 FTE students appears quite different. For example, in private Research I and II institutions the number of FTE library staff per 1,000 FTE students was 24.0 and in public Research I and II institutions it was 12.3 (table 10). Similarly, in private Baccalaureate I and II institutions there were 14.3 FTE staff per 1,000 FTE students, while in public Baccalaureate I and II institutions there were 7.9 FTE staff per 1,000 FTE students.

[3]Academic library staff were reported in the survey form in full-time-equivalent (FTEs) staff.

Table 10.—Total academic library staff in 1996, number of staff per 1,000 full-time-equivalent (FTE) students in 1996, and percent change between 1990 and 1996 by control and Carnegie Classification

Institutional characteristic	Total staff including student assistants		Total staff including student assistants per 1,000 FTE students				
	Number	Percent change 1990-1996	Mean	Percent change 1990-1996	Lower quartile	Median	Upper quartile
Total	95,580	-1.3%	9.6	-6.5%	5.1	8.7	15.5
Public	58,506	-1.8%	7.8	-6.4%	4.0	5.9	8.4
Private	37,074	-0.6%	15.1	-7.4%	8.1	13.0	22.4
Research I and II	33,400	-1.0%	14.7	-1.6%	10.1	13.3	19.4
Public	22,276	-1.0%	12.3	-1.1%	9.3	12.3	14.0
Private	11,124	-1.0%	24.0	-3.7%	16.8	22.8	30.1
Doctoral I and II	10,301	5.5%	10.5	3.4%	7.8	10.2	13.8
Public	6,587	3.5%	9.0	1.6%	7.1	8.9	10.7
Private	3,714	9.5%	14.6	6.8%	10.6	13.4	17.5
Master's I and II	19,465	-3.8%	8.3	-9.5%	6.5	8.4	11.3
Public	13,014	-6.1%	7.5	-10.3%	6.0	7.2	9.0
Private	6,451	1.0%	10.5	-8.8%	7.8	10.3	13.1
Baccalaureate I and II	10,537	-6.9%	12.9	-15.4%	8.7	12.4	17.8
Public	1,427	-1.6%	7.9	-9.4%	6.2	7.8	10.2
Private	9,109	-7.6%	14.3	-16.4%	9.7	13.4	19.1
Associate of Arts	13,354	-3.9%	4.4	-11.6%	3.3	4.9	7.2
Public	12,197	-4.1%	4.3	-11.8%	3.3	4.6	6.2
Private	1,157	-0.5%	7.4	-6.0%	4.1	8.0	14.4
Specialized	6,349	5.7%	17.2	-2.6%	10.7	19.7	36.4
Public	1,782	1.6%	16.6	-10.2%	10.1	17.8	28.2
Private	4,567	7.7%	17.4	1.2%	10.8	19.6	38.5
Not classified	2,175	55.3%	13.1	55.8%	4.3	9.1	28.5

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1990 and 1996" and "Fall Enrollment Survey, 1995."

NOTE: Twenty-five percent of institutions fall into each quartile grouping. For any statistic, all institutions in the lower quartile fell at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had 5.1 or fewer staff per 1000 FTE students.

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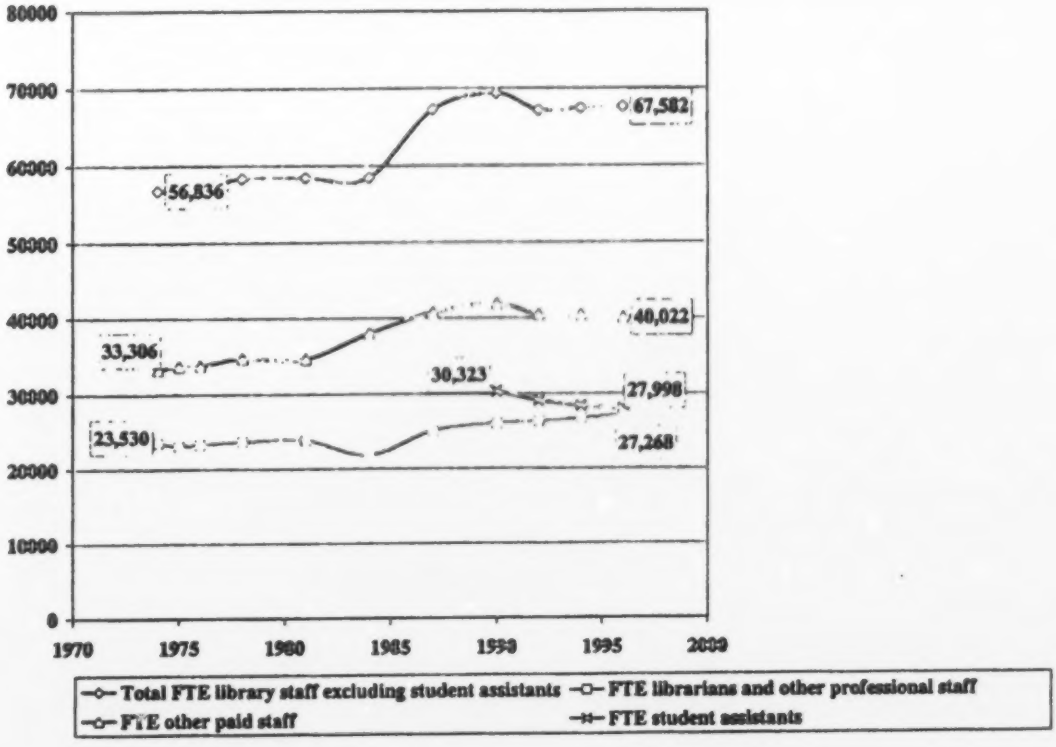
Change in Staff Over Time Since 1974

Figure 10 graphs FTE staff for total staff (excluding student assistants but including contributed services staff),[4] other non-professional staff, and librarians and other professional staff from 1974 to 1996. Data on FTE student assistants are available and graphed only for the period after 1990.

Figure 10.—Number of academic library full-time-equivalent (FTE) staff: 1974-1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1996*, table 412; and Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1994 and 1996."

[4] Contributed services staff are staff, such as members of religious orders, whose services are valued by booking entries rather than by full cash transactions.

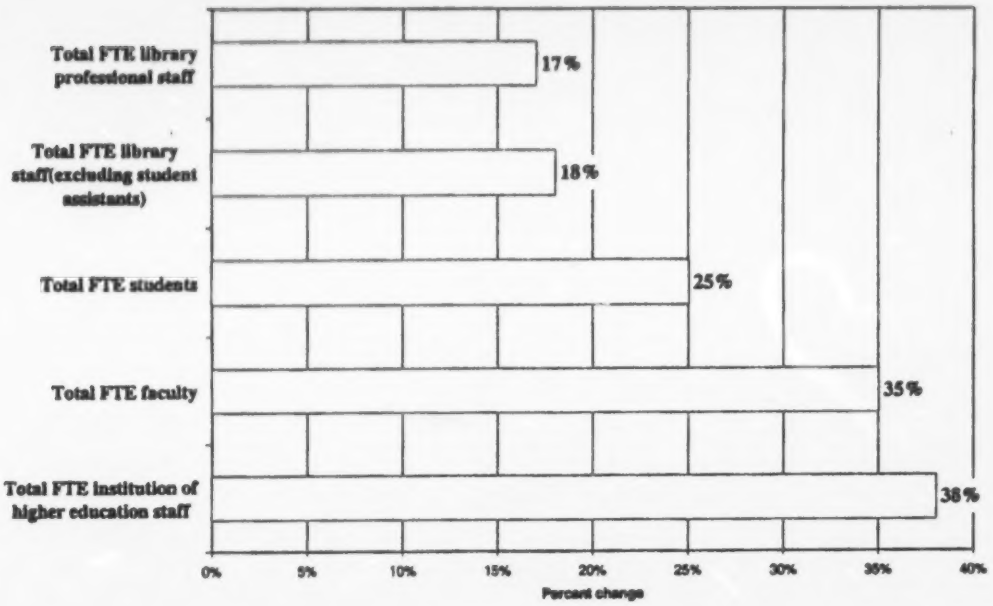
Between 1967 (not shown on graph) and 1977, the total number of non-student assistant library FTE staff grew from 43,500 in 1967 to 57,087 in 1977 (Beazley, 1979). By 1988, this number was 67,300, and in 1990 the number was 69,359. Between 1990 and 1992, however, declines in library staffing were reported (Williams, 1994), with the total number of staff, including contributed services staff, being 67,166. The comparable number in 1996 was 67,582 (figure 10).

Change in Staff, Including Student Assistants. Comparable data on the number of FTE student assistants is available only since 1990. When the total library staff is considered (including student assistants) for institutions reporting in both 1990 and 1996, we see that the total numbers have declined by 1.3 percent since 1990 (table 10). When considered per 1,000 FTE students there was a decline of 6.5 percent between 1990 and 1996 (table 10). These declines occurred at both public and private institutions. The largest decline per 1,000 FTE students was at Baccalaureate I and II institutions (15.4 percent), followed by Associate of Arts institutions (11.6 percent) and Master's I and II institutions (9.5 percent). Library staff per 1,000 FTE students at Doctoral I and II institutions, on the other hand, increased by 3.4 percent.

Changes in Library Staff Relative to Total Institution Staff and Students

Counts of library staff since the mid-1970s suggest that the number of academic library staff has not kept pace with student enrollment, and lags behind the increases experienced by the total postsecondary degree-granting institution staff. Over the period from 1976 to 1995 (two dates for which comparable figures on total FTE staff are available), the total full-time-equivalent number of FTE staff increased from 1.86 million to 2.60 million (a 38 percent increase) and FTE students went from 8 million to 10 million (a 25 percent increase). FTE faculty increased by 35 percent (calculated from *Fall Staff in Postsecondary Institutions, 1995*). In contrast, the number of FTE library staff (excluding student assistants) increased by 18 percent. FTE library professional staff increased by 17 percent over about the same period (1976 to 1996) (figure11).

Figure 11.—Percent change in full-time-equivalent (FTE) academic library staff and postsecondary degree-granting institution FTE students and staff: 1976-1995/96



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Staff in Postsecondary Institutions, 1995."

NOTE: The time periods used in the calculations correspond to the years of scheduled data collections. Calculations of percent change for library-related staff are for the period 1976 to 1996. Calculations of percent change for students, faculty and all FTE staff in degree-granting postsecondary institutions are for 1976 to 1995.

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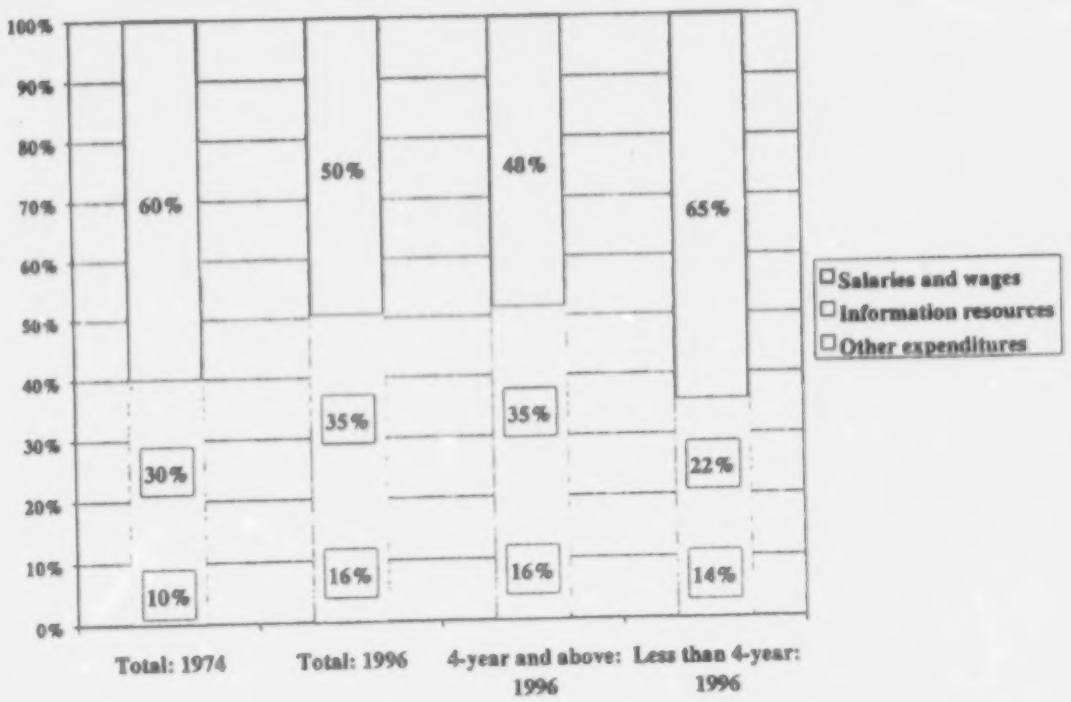
Academic Library Expenditures

In 1996, academic library operating expenditures totaled just over 4.3 billion dollars. Library expenditures cover a wide range of materials and activities ranging from salaries and wages to postage for document delivery. In recent years the survey categories have been revised to include computer-related items and electronic information resources. Figure 12 provides the percent distribution for broad categories of expenditures, and the detailed categories for which separate expenditure information was collected in 1996 are listed in table 11.

Figure 12.—Percentage distribution of academic library operating expenditures by expenditure type and institution level: 1974 and 1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1996*, table 412; and Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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Table 11.—Total operating expenditures for academic libraries in 1996, amount of expenditures per full-time-equivalent (FTE) student in 1996, and percentage distribution of expenditures in 1990 and 1996 by type of expenditures

Operating expenditures	Total expenditures in thousands 1996	Expenditures per FTE student 1996	Percent distribution of total expenditures 1996	Percent distribution of total expenditures 1990
Total	$4,301,815	$305.68	100.0%	100.0%
Salaries and wages	2,147,842	214.47	49.9	52.0
Information resources	1,499,249	149.77	34.9	34.1
Current serial subscriptions	780,830	78.14	18.2	16.9
Books and bound serials	472,592	47.09	11.0	12.3
Microforms	61,577	6.14	1.4	1.8
Audio-visual	28,879	2.87	0.7	0.7
Document delivery	17,645	1.76	0.4	0.3
Computer files/search services	103,539	10.34	2.4	2.3
Other information resources	34,186	3.42	0.8	0.6
Furniture and equipment	56,128	5.60	1.3	1.5
Computer hardware and software	157,949	15.78	3.7	1.9
Bibliographic utilities, networks, consortia	85,113	8.49	2.0	1.1
Preservation	45,610	4.57	1.1	1.1
Other operating expenditures	264,314	30.99	6.1	8.2

NOTE: Amounts used for percent distribution calculation include imputed data in both 1990 and 1996. FTE student is calculated by taking one-third of part-time enrollment and adding the amount to full-time enrollment.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1990 and 1996," and "Fall Enrollment Survey, 1995."

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Distribution of Library Operating Expenditures

As one can see from figure 12 and table 11, salaries and wages account for half (50 percent) of all operating expenditures. Descriptively speaking, the proportion of expenditures spent on salaries and wages has declined over the last 20 years, going from 60 percent in 1974 to 50 percent in 1996 (figure 12).

The percentage of operating expenditures going to salaries and wages was 60 percent in 1974 and 50 percent in 1996

The proportion of expenditures spent on salaries and wages was similar across public and private institutions and institutions of various enrollment sizes (52 percent in public institutions versus 47 percent in private). However, the proportion of the expenditure budget spent on salaries and wages at less than 4-year institutions was somewhat larger (65 percent) than at 4-year and above institutions (48 percent) (figure 12 and appendix table B-10).

Table 11 shows that the detailed expenditure distributions in 1996 and 1990 are very similar, though the proportion of expenses attributed to new electronic resources and services was higher overall in 1996 than in 1990. In 1996, 8.1 percent of expenditures went to the combined categories of computer files and searches, computer hardware and software, and bibliographic utilities, networks, and consortia, compared to 5.3 percent in 1990 (table 11). This increase in electronic services-related expenditures was consistent with that reported by other researchers. The Association of Research Libraries (ARL) reported that the percentage of library materials expenditures for electronic resources nearly doubled over 3 years—from 3.60 percent in 1992-1993 to 6.97 percent in 1995-96 (ARL, *Special Issue: Issues in Research Library Measurement*, April 1998).

The percentage of expenditures going to new electronic resources and services was about 8.1 percent in 1996 and 5.3 percent in 1990

Distribution of Information Resources Expenditures

An examination of the distribution of expenditures for information resources (figure 13) reveals the dominance of serials expenditures, which accounted for just over half (52 percent) of all information resources expenditures. A number of library expenditure analyses also show the large proportion of information resource expenditures spent on serials and the increase in unit costs over the last 10 years. Statistics reported for research libraries by the ARL indicated that between 1986 and 1995, ARL libraries doubled expenditures for serials while buying 8 percent fewer titles (Kyrillidou, Maxwell, and Stubbs, 1996).

Serial expenditures account for over one-half of information resource expenditures

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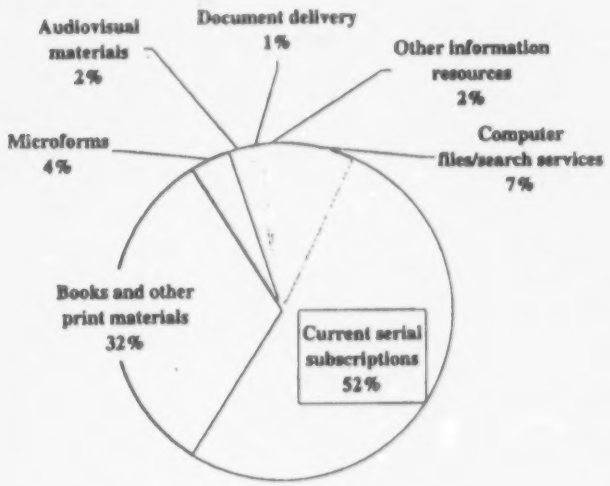
Figure 13.—Distribution of academic library expenditures for information resources: 1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Change in Total Operating Expenditures and Operating Expenditures Per Full-Time-Equivalent (FTE) Student

In current dollars, total operating expenditures have gone from $1.09 billion in 1974 to $4.30 billion in 1996. In constant 1996 dollars, total operating expenditures have gone from $3.47 billion to $4.30 billion (tabulated from NCES library statistics of colleges and universities, various years, and 1996 Academic Library Survey). Public academic libraries had 61 percent of the expenditures, and private academic libraries had 39 percent. Research I and II institutions accounted for 41 percent of the total academic library expenditures. Baccalaureate I and II institutions accounted for 9 percent. Between 1990 and 1996, overall library expenditures increased by 10 percent in constant dollars (table 12).

Table 12.—Total and per full-time-equivalent (FTE) student academic library operating expenditures, and percent change between 1990 and 1996 in constant dollars by control and Carnegie Classification

Institutional characteristics	Total amount		Per full-time-equivalent (FTE) student				
	Amount in Thousands	Percent change 1990-96 in constant dollars	Mean	Percent change 1990-96 in constant dollars	Lower quartile*	Median	Upper quartile*
Total	$4,301,815	10.1%	$431	4.4%	$179	$310	$531
Public	2,629,997	6.3	350	1.5	144	220	339
Private	1,671,819	17.3	682	8.7	258	417	754
Research I and II	1,780,260	10.7	781	10.4	524	673	1,067
Public	1,135,016	8.0	625	8.3	468	593	697
Private	645,244	16.3	1,390	13.4	899	1,223	1,823
Doctoral I and II	494,021	8.0	502	5.8	347	469	660
Public	305,532	5.2	418	3.0	326	396	473
Private	188,489	14.1	741	11.6	508	650	769
Master's I and II	810,453	8.0	344	1.7	270	333	435
Public	561,129	2.8	322	-1.6	261	314	389
Private	249,324	22.2	406	9.6	292	377	485
Baccalaureate I and II	388,732	13.8	476	1.9	285	390	581
Public	54,171	3.6	301	-4.8	232	274	392
Private	334,561	15.6	525	2.6	298	409	623
Associate of Arts	465,249	4.9	155	-3.1	118	169	244
Public	432,888	4.0	152	-4.1	121	163	218
Private	32,361	28.3	207	28.4	102	212	381
Specialized	283,334	18.8	766	8.2	350	609	1,518
Public	96,737	18.4	901	3.3	398	819	1,477
Private	186,597	19.0	711	10.6	337	592	1,528
Not Classified	79,765	32.8	481	31.3	126	281	1,094

NOTE: Amounts reported for 1996 include imputed data to account for nonresponse. Calculations of percent change include only those institutions reporting in both 1996 and 1990 and are reported only for variables in which 70 percent or more of libraries reported for the item in both 1990 and 1996. FTE enrollment is calculated by taking one-third of part-time enrollment and adding the amount to full-time enrollment. Details may not sum to totals because of rounding. Constant dollars calculated based on consumer price index as published in *1996 US Statistical Abstract*, table 745, and *Digest of Education Statistics, 1997*, table 38.

*Twenty-five percent of institutions fall into each quartile grouping. For any statistic, all institutions in the lower quartile fell at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had $179 or less operating expenditures per FTE student.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1990 and 1996," and "Fall Enrollment Survey, 1995."

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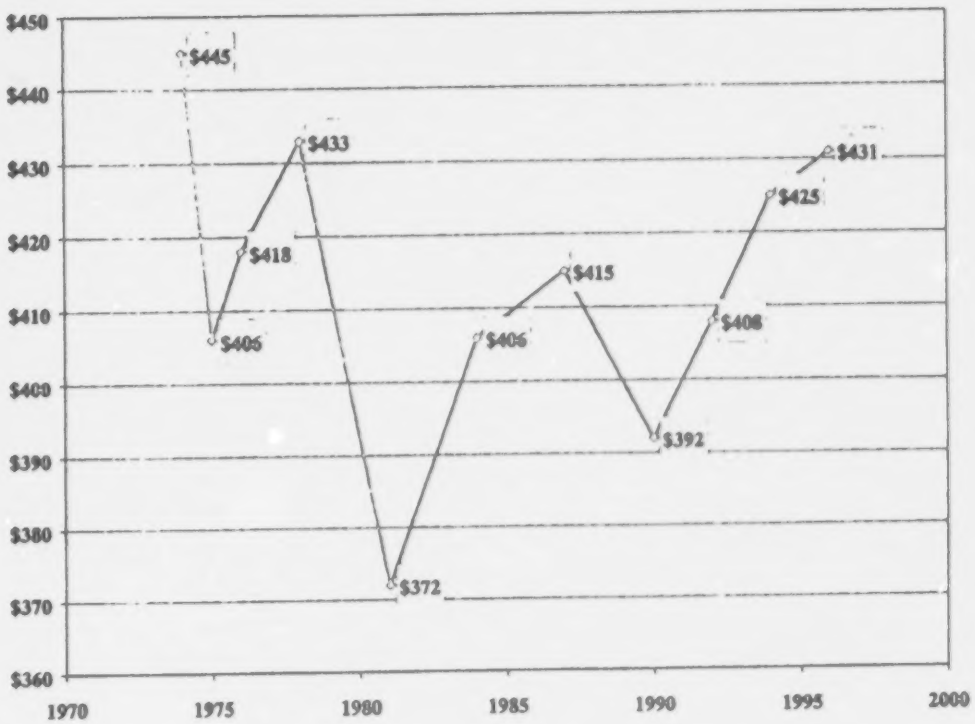
Expenditures Per Full-Time-Equivalent (FTE) Student. In constant dollars, expenditures per FTE student were $445 in 1974 and $431 in 1996. The lowest amount per FTE student occurred in 1981 when constant 1996-dollar expenditures were $372 and in 1990 when expenditures were $392 (figure 14).

Figure 14.—Academic library operating expenditures per full-time-equivalent (FTE) student in constant (1996) dollars: 1974-1996



NOTE: Constant dollars calculated based on Consumer Price Index (CPI) as published in *Digest of Education Statistics, 1997*, table 38, and 1996 *US Statistical Abstract*, table 745.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1997*, table 412; and Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1994 and 1996," and "Fall Enrollment Survey, 1995."

In constant dollars, between 1990 and 1996, overall expenditures per FTE student increased by 4.4 percent. Associate of Arts institutions, however, experienced a decline of 3.1 percent over the period (table 12).

Expenditures per full-time-equivalent (FTE) student ranged from $152 per FTE student in public Associate of Arts institutions to $1,390 in private Research I and Research II institutions (table 12). Expenditures per FTE student in private institutions were about double those in public institutions ($682 and $350, respectively). Median expenditures per institution also showed an almost twofold difference between public and private institutions. The median expenditures per FTE student were $310 overall, $220 in public and $417 in private institutions (table 12).

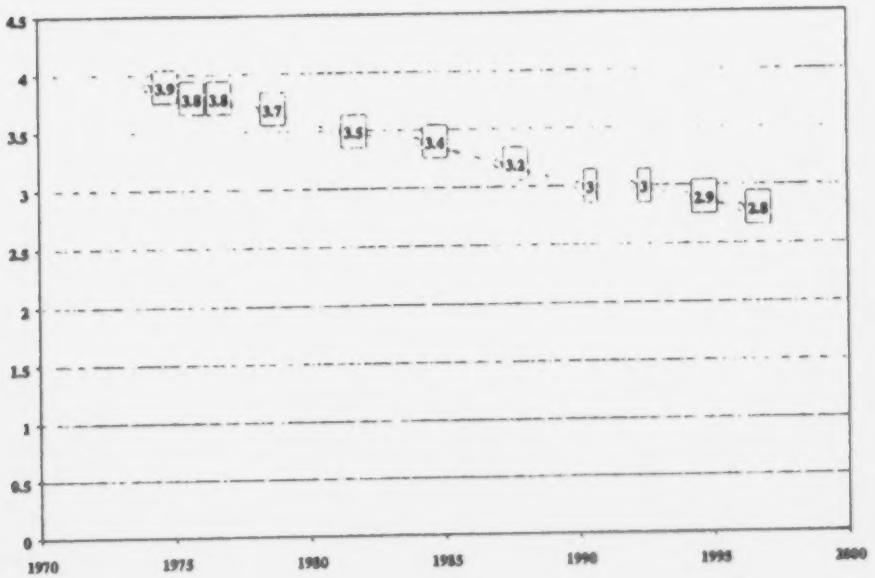
Academic Library Operating Expenditures as a Percentage of Total Education and General (E&G) Expenditures

Total Education and General (E &G) expenditures are collected in the IPEDS Finance Survey and this information has traditionally been used to look at the extent to which libraries are being supported financially.

As part of the ongoing development of standards for academic libraries, the Association of College and Research Libraries (ACRL) has established standards on the percentage of total institution expenditures that should go to academic libraries for two of the three categories of academic libraries. The *Standards for Community, Junior, and Technical Learning Resource Programs* and the *Standards for College Libraries* both established a standard that academic libraries should receive 6 percent of their university's total budget. The *Standards for University Libraries* does not mention a specific percentage. However, the 6 percent goal is often also cited for this group as a target. Data on research libraries have shown that this goal has never been reached and in fact that the share has declined over the period from 1982-1992 (Goudy, 1993; Cummings et. al, 1992).

Examination of the data for the total group of academic libraries for the period 1974-1996 shows that the percentage of total institutional E&G expenditures spent by libraries appears to have declined from 3.9 in 1974 to 2.8 in 1996 (figure 15).

Figure 15.—Academic library operating expenditures as a percentage of total Education and General (E&G) expenditures: 1974-1996



SOURCE: United States Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics, 1996*, table 412; and Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Finance Survey, 1996."

Using the set of institutions reporting in both 1990 and 1996, we see that there was a decline of 7.5 percent in the percentage of the total E&G expenditures spent by academic libraries over the 1990-96 period (table 13). A decline was experienced by all categories of libraries except those in the "not classified" category (table 13).

Table 13.—Academic library operating expenditures as a percentage of total Education and General (E&G) expenditures; and percent change between 1990 and 1996, by control and Carnegie Classification

Institutional characteristics	Percentage of total E&G expenditures 1996	Percent change in percent of total E&G 1990-96	Lower quartile	Median	Upper quartile
Total	2.8%	-7.5%	1.9%	2.7%	3.6%
Public	2.7	-7.5	1.8	2.5	3.2
Private	2.9	-7.8	2.0	2.8	4.3
Research I and II	2.9	-6.9	2.4	2.8	3.3
Public	2.8	-4.3	2.5	2.8	3.2
Private	2.9	-6.5	2.2	2.8	3.6
Doctoral I and II	3.2	-10.7	2.3	3.1	3.7
Public	3.3	-9.3	2.7	3.2	3.6
Private	3.2	-13.4	2.1	3.0	3.9
Master's I and II	3.1	-9.1	2.4	2.9	3.5
Public	3.3	-9.3	2.7	3.1	3.9
Private	2.7	-6.7	2.1	2.6	3.2
Baccalaureate I and II	3.0	-9.8	2.2	2.8	3.4
Public	3.2	-13.5	2.8	3.3	3.8
Private	3.0	-9.2	2.1	2.7	3.3
Associate of Arts	2.0	-11.4	1.5	2.2	3.0
Public	2.2	-11.8	1.6	2.2	2.9
Private	1.2	-0.2	1.1	2.2	3.4
Specialized	2.2	-5.1	1.9	3.6	6.8
Public	1.4	-4.1	1.4	1.9	2.9
Private	3.0	-7.4	2.2	4.1	7.2
Not classified	3.3	14.6	1.3	2.8	7.9

NOTE: Figures for 1996 include imputed data to account for nonresponse. Calculations of percent change include only those institutions reporting in both 1996 and 1990 and are reported only for variables in which 70 percent or more of libraries reported for the item in both 1990 and 1996. Twenty-five percent of institutions fall into each quartile grouping. For any statistic, all institutions in the lower quartile fell at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had 1.9 percent or less of expenditures for academic libraries.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Surveys, 1990 and 1996," "IPEDS Finance Surveys 1990 and 1996."

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Summary/Conclusion

The first half of the 1990s was a time of rapid change in methods of information dissemination. By 1996, 90 percent of academic libraries made electronic reference services available. Almost 80 percent of academic libraries had electronic catalogs, and over half of these were made available to off-campus clients. Eighty-one percent provided Internet access from within the library. While general circulation increased modestly, there were larger increases in the use of interlibrary loans, reflecting the increasingly open computerized access to catalogs.

Descriptive statistics suggest that while the number of book volumes held in collections increased from 1990 to 1996, the number per FTE student increased only slightly since 1987. The number of volumes added per year appears to have remained relatively constant since 1974, ranging from 23,000 in 1974 to a low of 19,507 in 1990. In 1996, this number was at 21,000. Information resources such as computer files and films and videos had the highest ratios of items added to items held, reflecting the relative newness of these categories of materials and building of collections in these areas.

Descriptively speaking, there continue to be large differences in the number of volumes per FTE student between institutions by Carnegie classification. The number of volumes per FTE student ranged from 17 in Associate of Arts institutions to 154 in Research I and II institutions. Associate of Arts institutions have 6 percent of all volumes held across libraries while having almost one-third of FTE student enrollment (30 percent).

In a period of increasing library automation and change in library staff roles, the actual total number of FTE academic library staff has declined slightly between 1990 and 1996—reflecting a trend also observed in 1992 and 1994 (Rossi and Daugherty, 1997; Cahalan and Justh, 1998). The number of staff reported per 1,000 FTE students declined by almost 7 percent between 1990 and 1996. While declines in the total number of academic library staff have occurred only recently, over the last 20 years increases in academic library staff seem not to have kept pace with those of the total staff in degree-granting postsecondary institutions. The number of professional staff in libraries has remained largely stable over the period between 1989 and 1996.

Academic library operating expenditures totaled over 4 billion dollars in 1996. The distributions of operating expenditures by category of expenditure in 1990 and 1996 were very similar, except for increases in the proportion going to electronic-related services and microforms and small declines in the proportion going to salaries and wages and book volumes. Serial expenditures continue to dominate the distribution of information resources expenditures. The amount of expenditures per FTE student in constant 1996 dollars was slightly lower in 1996 than 22 years earlier, in 1974, but increased since 1990 (one of the low

points) by about 10 percent. Academic library expenditures as a percentage of total institution expenditures continue to decline, and have ranged between 3.9 and 2.8 percent between 1974 and 1996. These figures fall short of the 6 percent recommended by Association of College and Research Libraries (ACRL). Data suggest that there were large differences in library operating expenditures and staff per FTE student by Carnegie classification. For example, library expenditures per FTE student were $155 in Associate of Arts institutions and $781 in Research I and II institutions. Similarly, the number of FTE library staff per 1,000 FTE students was 4.4 in Associate of Arts institutions and 14.7 in Research I and II institutions.

These data suggest that the changes in information technology were beginning to have impacts on academic library statistics in areas of types of services, staff numbers, collection additions, and distribution of expenditures. Future surveys will provide more information on the continued extent of these changes.

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Appendix A: Methodology

Scope

The Academic Libraries survey was mailed in August 1996 to all postsecondary institutions in the United States.* Among the 3,792 postsecondary degree-granting institutions in the United States that are the focus of this report the response rate was 95 percent. The Academic Library file and this report are limited to postsecondary degree-granting institutions.

Of the 3,792 postsecondary degree-granting institutions in the United States, there were 172 institutions that did not have their own library but shared a library with one or more of 96 other institutions. Those 172 institutions were excluded from the survey. There were also 212 institutions that were found to be out of scope because they did not have an academic library as defined by the survey. Thus there were 3,408 postsecondary degree-granting institutions of the 50 states and the District of Columbia that had academic libraries in 1996. The response among these 3,408 institutions was 94 percent.

An Academic Library is defined as an entity that provides all of the following:

- organized collection of printed or other materials, or a combination thereof;
- a staff trained to provide and interpret such materials as required to meet the informational, cultural, recreational, or educational needs of clientele;
- an established schedule in which services of the staff are available to clientele; and
- the physical facilities necessary to support such a collection, staff, and schedule.

This definition includes libraries that are part of Learning Resource Centers. The library must be operated by a postsecondary degree-granting institution.

Data Collection Procedures

The Academic Library Survey data are collected and processed by the Census Bureau for NCES. In 1990, an NCES/IPEDS (Integrated Postsecondary Education Data System) academic library survey improvement project was begun with the assistance of the National Commission on Libraries and Information Science (NCLIS) and the American Library Association's Office of Research and Statistics (ALA-ORS). The project identified a librarian in each state to work with IPEDS Coordinators in submitting library data to NCES. For the 1990, 1992, 1994, and 1996 data collections, many of those library representatives took major responsibility for collecting data in their state. Others were available to promote prompt responses from librarians and to assist in problem resolution when anomalies were discovered in completed questionnaires.

* This report is based only on responses of postsecondary degree-granting institutions. The response rate among "other postsecondary institutions" is typically under 50 percent.

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The project also assisted NCES in developing microcomputer software packages for use by states in reporting library data to NCES. The software package was named Input and Data Editing for Academic Library Statistics (IDEALS). Academic librarians within each state completed hard copy forms as in the past and returned them to the state's library representative or the IPEDS Coordinator. States were given the option of submitting the library forms to NCES, but were encouraged to enter those data into IDEALS and submit the data on diskette to NCES.

The IDEALS package features some internal consistency edit checks as well as a few range checks and summation checks. Library representatives at the state level could run edit/error reports and make corrections before submitting the data on diskette to NCES.

Editing and Imputation

The IDEALS computer program described above includes many edit checks providing some warnings as the data are being keyed and provides an edit/error report after the data have been keyed. Examples of these edit checks are listed below:

- *Summations*—reported totals are compared with the sums of the constituent data items. If they are not equal, an error message is generated.

- *Relational edit checks*—the program compares data entries from one section of the questionnaire with data entries from another section of the questionnaire for consistency. For example, if books and bound serials were added during the fiscal year the program would expect some expenditure to be reported for books and bound serials. If one is reported without the other an error message is generated. Another example is that the number of volumes of print materials added during the fiscal year cannot exceed the total number of volumes held at the end of the fiscal year.

- *Range checks*—For example, if the average salary of librarians is less than $20,000 or greater than $100,000, an error message is generated. If any of the collections data, except for volumes held at the end of the year, is greater than 1,000,000, an error message is generated. If the reported hours of service is less than 10 hours per week or greater than 168 hours per week, an error message is generated.

When probable errors were identified by the IDEALS edit checks, state or Census Bureau personnel contacted the institution to resolve the problem.

After the data were received by NCES from every state, the data files were merged and general edits and imputations were performed. Some examples follow.

- If a total was blank or zero, but there were one or more positive subtotals the total was changed to equal the sum of the subtotals.

- If prior year (1994) data were available, the 1994 responses were used for imputation. A ratio adjustment was done, taking into account the average amount of change that occurred in the variable within the imputation stratum to which the institution was assigned. These ratios were then applied to the prior year data used for imputation. The

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strata were based upon the highest level of degree (doctor's, master's, bachelor's, and associate), and control and size of institution. The four control/size imputation categories were: public, less than median number of degrees for institutions in that category; public, equal to or greater than the median; private, less than the median; private, equal to or greater than the median.

- If prior year data were unavailable, for purposes of imputation, the postsecondary file was divided into the 8 imputation classes noted above and averages for the class were applied.

- To calculate the imputed value for a subtotal, the average estimate was calculated across the set of respondents in each class, including ones for which the total was obtained by adding the subtotals, but excluding those for which the sum of the subtotals did not originally equal the total. The average subtotal value was divided by the average total value within each imputation class to obtain an average proportion. The average proportion was multiplied by the reported total to obtain the imputed subtotal value.

- If for total staff (Part B, line 6 on the survey form) and total operating expenditures (Part C, line 19 on the survey form), the total and all subtotals were blank or zero, they were imputed by taking the average of the imputation class.

- Values were imputed for all data items in Parts B through F of the survey form, except contributed services staff (Part B, line 4 on the survey form) and employee fringe benefits (Part C, line 23 on the survey form). These categories were applicable to only a few institutions. Values were not imputed for electronic services (Part G). Tables B-1 - 11 and B-13 reflect imputed data. Table B-12, which reports percentages, does not include imputed data.

The imputation procedure of using a ratio adjustment to prior year data for imputation represented a change from that followed in previous cycles, and may have resulted in some small differences in estimates. The change for 1996 to the use of ratio adjustments allowed use of information about actual changes in the data, which enabled more accurate imputation. While checks indicate that the effect of the change in imputation procedure was not large, this report uses data from institutions reporting in each reference year to make comparisons over time.

Response Rates

Of the 3,408 degree granting postsecondary institutions that have academic libraries, 197 or 5.8 percent were complete nonrespondents. Tables A-1 to A-4 present further information on response rates. The first three rows of table A-1 present the number of academic libraries, and the number and percentage of nonrespondents and respondents by level and control of institution. In addition, the remaining rows show the number and percentage of libraries responding for each item.

Due to NCES standards only items that have at least a 70 percent item response rate were included in the comparisons over time. The comparisons over time were made using the same set of institutions in each year.

Classifications Used in the Report

The tables in this report present the data by state, control (public, private); level of highest offering (doctor's, master's, bachelor's, and less than 4-year); size of FTE student enrollment (less than 1,500; 1,500 to 4,999; 5,000 or more); and the 1994 Carnegie classification. For table presentation, "level I" and "level II" of the Carnegie classifications were combined. The Carnegie classification categories used are as follows: Research I and II; Doctoral I and II; Master's I and II; Baccalaureate I and II; Associate of Arts; and Specialized. In addition, there were 316 institutions that did not have a Carnegie classification in 1994 and these were put into a "not classified" category (Carnegie Foundation for the Advancement of Teaching, *A Classification of Institutions of Higher Education, 1994 Edition*, Princeton, NJ).

Caution on the analysis of data by state and by level and control of institution. Because the number of complete nonresponses can vary by state and affect the reliability of the state estimates, table A-2 presents the distribution of the set of complete nonrespondents by libraries by state and by level and control of institution. Table A-3 gives the number of academic libraries by state, level, and control of institution. The data user should be especially cautious in using data at a level of detail where the nonresponse rate was 30 percent or greater.

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Table A-1.- Number and percent of responding academic libraries by item and by level and control of institution: 1996

	Total post-secondary degree-granting institutions	Pct responding	4-year institutions								Less than 4-year		Public		Private	
			Total 4-year institutions		Highest level of degree											
					Doctor's		Master's		Bachelor's							
			Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding
All institutions	3,408	100.0%	2,115	100.0%	538	100.0%	905	100.0%	670	100.0%	1,293	100.0%	1,573	100.0%	1,835	100.0%
Non-responding libraries	197	5.8	115	5.4	31	5.8	39	4.3	45	6.7	82	6.3	49	3.1	148	8.1
Responding libraries	3,211	94.2	2,000	94.6	507	94.2	866	95.7	625	93.3	1,211	93.7	1,524	96.9	1,687	91.9
Part B-Library staff																
Librarians/professional staff	3,106	91.1	1,936	91.5	490	91.1	844	93.3	600	89.6	1,170	90.5	1,493	94.9	1,613	87.9
All other paid staff	3,030	88.9	1,896	89.6	490	91.1	824	91.0	580	86.6	1,134	87.7	1,485	94.4	1,545	84.2
Contributed services staff	2,713	79.6	1,709	80.8	435	80.9	733	81.0	539	80.4	1,004	77.6	1,318	83.8	1,395	76.0
Student assistants/all funding	3,027	88.8	1,901	89.9	483	89.8	829	91.6	587	87.6	1,126	87.1	1,458	92.7	1,569	85.5
Total FTE staff	2,881	84.5	1,817	85.9	467	86.8	787	87.0	561	83.7	1,064	82.3	1,411	89.7	1,470	80.1
Part C-Library operating expenditures																
Librarians/professional staff	3,014	88.4	1,874	88.6	484	90.0	811	89.6	577	86.1	1,140	88.2	1,466	93.2	1,548	84.4
All other paid staff	2,889	84.8	1,803	85.2	472	87.7	783	86.5	546	81.5	1,086	84.0	1,435	91.2	1,454	79.2
Student assistants	2,933	86.1	1,860	87.9	478	88.8	815	90.1	566	84.5	1,073	83.0	1,405	89.3	1,528	83.3
Books and other print materials (info resources)	3,145	92.3	1,960	92.7	492	91.4	851	94.0	615	91.8	1,185	91.6	1,498	95.2	1,647	89.8
Current serials	3,102	91.0	1,939	91.7	488	90.7	844	93.3	606	90.3	1,163	89.9	1,491	94.8	1,611	87.8
Microforms	2,819	82.7	1,754	82.9	432	80.3	779	86.1	541	80.7	1,065	82.4	1,383	87.9	1,436	78.3
Audiovisual materials	2,875	84.4	1,769	83.6	432	80.3	775	85.6	561	83.7	1,106	85.5	1,387	88.2	1,488	81.1
Computer files/search services	2,932	86.0	1,830	86.5	459	85.3	799	88.3	571	85.2	1,102	85.2	1,415	90.0	1,517	82.7
Document delivery/interlibrary loan	2,745	80.5	1,748	82.6	439	81.6	759	83.9	549	81.9	997	77.1	1,319	83.9	1,426	77.7
Other information resources	2,542	74.6	1,586	75.0	413	76.8	684	75.6	487	72.7	956	73.9	1,241	78.9	1,301	70.9
Preservation	2,835	83.2	1,821	86.1	474	88.1	792	87.5	554	82.7	1,014	78.4	1,352	86.0	1,483	80.8
Furniture and equipment	2,907	85.3	1,811	85.6	453	84.2	800	88.4	557	83.1	1,096	84.8	1,407	89.4	1,500	81.7
Computer hardware and software	2,944	86.4	1,834	86.7	467	86.8	809	89.4	557	83.1	1,110	85.8	1,408	89.5	1,536	83.7
Bibliographic utilities, networks, consortia	2,929	85.9	1,859	87.9	479	89.0	814	89.9	568	84.3	1,070	82.8	1,410	89.6	1,519	82.8
All other operating expenditures	3,039	89.2	1,915	90.5	489	90.9	836	92.4	589	87.9	1,124	86.9	1,470	93.5	1,569	85.5
Total operating expenditures	2,763	81.1	1,729	81.7	439	81.6	750	82.9	539	80.4	1,034	80.0	1,352	86.0	1,411	76.9
Part D-Library collections																
Books/serials cataloged vols. added	3,100	91.0	1,933	91.4	493	91.6	838	92.6	600	89.6	1,167	90.3	1,486	94.5	1,614	88.0
Books/serials cataloged vols. eofy	3,127	91.8	1,954	92.4	497	92.4	849	93.8	606	90.4	1,173	90.7	1,492	94.9	1,635	89.1
Books/serials cataloged titles added	2,802	82.2	1,700	80.4	405	75.3	755	83.4	538	80.3	1,102	85.2	1,330	84.6	1,472	80.2
Books/serials cataloged titles eofy	2,774	81.4	1,680	79.4	400	74.3	748	82.7	530	79.1	1,094	84.6	1,315	83.6	1,459	79.5
Govt. documents no. of units added	2,551	74.9	1,585	74.9	415	77.1	689	76.1	479	71.5	966	74.7	1,233	78.4	1,318	71.8
Govt. documents no. of units eofy	2,575	75.6	1,602	75.7	427	79.4	689	76.1	484	72.2	973	75.3	1,243	79.0	1,332	72.6
Govt. documents no. of titles added	2,289	67.2	1,338	63.3	318	59.1	584	64.5	434	64.8	951	73.5	1,085	69.0	1,204	65.6
Govt. documents no. of titles eofy	2,284	67.0	1,331	62.9	317	58.9	578	63.9	434	64.8	953	73.7	1,077	68.5	1,207	65.8
Current serials paid/unpaid added	2,983	87.5	1,846	87.3	455	84.6	808	89.3	581	86.7	1,137	87.9	1,417	90.1	1,566	85.3
Current serials paid/unpaid eofy	3,123	91.6	1,943	91.9	488	90.7	843	93.1	610	91.0	1,180	91.3	1,485	94.4	1,638	89.3
Current serials no. of titles added	2,720	79.8	1,651	78.1	386	71.7	727	80.3	536	80.0	1,069	82.7	1,293	82.2	1,427	77.8
Current serials no. of titles eofy	2,830	83.0	1,719	81.3	403	74.9	755	83.4	559	83.4	1,111	85.9	1,349	85.8	1,481	80.7
Microforms no. of units added	2,918	85.6	1,830	86.5	473	87.9	798	88.2	557	83.1	1,088	84.1	1,428	90.8	1,490	81.2
Microforms no. of units eofy	3,003	88.1	1,888	89.3	487	90.5	822	90.8	577	86.1	1,115	86.2	1,455	92.5	1,548	84.4

NOTE: Caution should be exercised when using data at a level of detail where the response rate was less than 70 percent.
NOTE: EOFY = held at End Of Fiscal Year
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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Table A-1.- Number and percent of responding academic libraries by item and by level and control of institution: 1996 (continued)

	Total post-secondary degree-granting institutions	Pct responding	4-year institutions								Less than 4-year		Public		Private	
			Total 4-year institutions		Highest level of degree											
					Doctor's		Master's		Bachelor's							
			Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding
Part D-Library collections																
Microforms no. of titles added	2,466	72.4%	1,463	69.2%	345	64.1%	643	71.0%	473	70.6%	1,003	77.6%	1,179	75.0%	1,287	70.1%
Microforms no. of titles eofy	2,575	75.6	1,504	71.1	335	62.3	667	73.7	500	74.6	1,071	82.8	1,228	78.1	1,347	73.4
Manuscripts/archives (feet) added	2,595	76.1	1,623	76.7	431	80.1	692	76.5	498	74.3	972	75.2	1,242	79.0	1,353	73.7
Manuscripts/archives (feet) eofy	2,722	79.9	1,718	81.2	458	85.1	725	80.1	533	79.6	1,004	77.6	1,288	81.9	1,434	78.1
Cartographic materials (units) added	2,673	78.4	1,660	78.5	432	80.3	704	77.8	522	77.9	1,013	78.3	1,311	83.3	1,362	74.2
Cartographic materials (units) eofy	2,765	81.1	1,710	80.9	449	83.5	725	80.1	534	79.7	1,055	81.6	1,359	86.4	1,406	76.6
Graphic materials (no. units) added	2,654	77.9	1,631	77.1	432	80.3	689	76.1	508	75.8	1,023	79.1	1,308	83.2	1,346	73.4
Graphic materials (no. units) eofy	2,735	80.3	1,678	79.3	443	82.3	718	79.3	515	76.9	1,057	81.7	1,338	85.1	1,397	76.1
Sound recordings (no. units) added	2,852	83.7	1,783	84.3	454	84.4	775	85.6	552	82.4	1,069	82.7	1,377	87.5	1,475	80.4
Sound recordings (no. units) eofy	2,945	86.4	1,837	86.9	462	85.9	796	88.0	577	86.1	1,108	85.7	1,410	89.6	1,535	83.7
Sound recordings (no. titles) added	2,626	77.1	1,594	75.4	369	68.6	697	77.0	526	78.5	1,032	79.8	1,256	79.8	1,370	74.7
Sound recordings (no. titles) eofy	2,647	77.7	1,592	75.3	368	68.4	690	76.2	532	79.4	1,055	81.6	1,262	80.2	1,385	75.5
Film/video materials units added	2,947	86.5	1,824	86.2	455	84.6	799	88.3	568	84.8	1,123	86.9	1,410	89.6	1,537	83.8
Film/video materials units eofy	3,015	88.5	1,866	88.2	465	86.4	810	89.5	589	87.9	1,149	88.9	1,438	91.4	1,577	85.9
Film/video materials titles added	2,712	79.6	1,637	77.4	376	69.9	721	79.7	538	80.3	1,075	83.1	1,290	82.0	1,422	77.5
Film/video materials titles eofy	2,720	79.8	1,641	77.6	377	70.1	710	78.5	552	82.4	1,079	83.4	1,285	81.7	1,435	78.2
Computer files no. of units added	2,849	83.6	1,744	82.5	441	82.0	754	83.3	547	81.6	1,105	85.5	1,378	87.6	1,471	80.2
Computer files no. of units eofy	2,922	85.7	1,801	85.2	453	84.2	779	86.1	567	84.6	1,121	86.7	1,408	89.5	1,514	82.5
Computer files no. of titles added	2,686	78.8	1,603	75.8	378	70.3	714	78.9	509	76.0	1,083	83.8	1,283	81.6	1,403	76.5
Computer files no. of titles eofy	2,729	80.1	1,643	77.7	383	71.2	741	81.9	517	77.2	1,086	84.0	1,293	82.2	1,436	78.3
Other library materials units added	2,495	73.2	1,530	72.3	387	71.9	668	73.8	473	70.6	965	74.6	1,221	77.6	1,274	69.4
Other library materials units eofy	2,581	75.7	1,583	74.8	402	74.7	691	76.4	488	72.8	998	77.2	1,261	80.2	1,320	71.9
Part E-Library services, fiscal year																
Circulation trans. general	3,137	92.0	1,957	92.5	492	91.4	853	94.3	610	91.0	1,180	91.3	1,493	94.9	1,644	89.6
Circulation trans. reserve	2,909	85.4	1,810	85.6	458	85.1	779	86.1	572	85.4	1,099	85.0	1,398	88.9	1,511	82.3
Inter-loans provided to	2,901	85.1	1,831	86.6	453	84.2	799	88.3	579	86.4	1,070	82.8	1,378	87.6	1,523	83.0
Inter-loans received from	2,964	87.0	1,856	87.8	458	85.1	814	89.9	583	87.0	1,108	85.7	1,408	89.5	1,556	84.8
Info serv. no. of presentations	3,053	89.6	1,899	89.8	475	88.3	828	91.5	594	88.7	1,154	89.2	1,477	93.9	1,576	85.9
Info serv. no. of persons	2,991	87.8	1,856	87.7	471	87.5	805	89.0	577	86.1	1,136	87.9	1,461	92.9	1,530	83.4
Part F-Library service per typical week																
Public service hours	3,101	91.0	1,937	91.6	482	89.6	844	93.3	609	90.9	1,164	90.0	1,486	94.5	1,615	88.0
Gate count	2,658	78.0	1,609	76.1	404	75.1	708	78.2	496	74.0	1,049	81.1	1,303	82.8	1,355	73.8
Reference transactions	2,795	82.0	1,731	81.8	446	82.9	755	83.4	529	79.0	1,064	82.3	1,357	86.3	1,438	78.4
Part G-Electronic services																
Electronic catalog that includes library's holdings																
Access from within library	3,172	93.1	1,977	93.5	505	93.9	857	94.7	613	91.5	1,195	92.4	1,515	96.3	1,657	90.3
Access from elsewhere on campus	2,946	86.4	1,852	87.6	489	90.9	806	89.1	555	82.8	1,094	84.6	1,432	91.0	1,514	82.5
Access off campus by primary clientele	2,891	84.8	1,820	86.1	487	90.5	793	87.6	538	80.3	1,071	82.8	1,412	89.8	1,479	80.6
Access off campus by others	2,857	83.8	1,802	85.2	484	90.0	785	86.7	531	79.3	1,055	81.6	1,395	88.7	1,462	79.7

NOTE: Caution should be exercised when using data at a level of detail where the response rate was less than 70 percent.
NOTE: EOFY = held at End Of Fiscal Year
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table A-1.- Number and percent of responding academic libraries by item and by level and control of institution: 1996 (continued)

	Total post-secondary degree-granting institutions	Pct responding	4-year institutions								Less than 4-year		Public		Private	
			Total 4-year institutions		Highest level of degree											
					Doctor's		Master's		Bachelor's							
			Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding
Part G--Electronic services																
Electronic indexes and reference tools																
Access from within library	3,172	93.1%	1,974	93.3%	505	93.9%	853	94.3%	614	91.6%	1,198	92.7%	1,514	96.2%	1,658	90.4%
Access from elsewhere on campus	2,907	85.3	1,830	86.5	484	90.0	797	88.1	547	81.6	1,077	83.3	1,409	89.6	1,498	81.6
Access off campus by primary clientele	2,851	83.7	1,791	84.7	481	89.4	781	86.3	527	78.7	1,060	82.0	1,390	88.4	1,461	79.6
Access off campus by others	2,782	81.6	1,746	82.6	465	86.4	762	84.2	517	77.2	1,036	80.1	1,355	86.1	1,427	77.8
Electronic full text periodicals																
Access from within library	3,161	92.8	1,965	92.9	502	93.3	849	93.8	612	91.3	1,196	92.5	1,508	95.9	1,653	90.1
Access from elsewhere on campus	2,907	85.3	1,830	86.5	484	90.0	797	88.1	547	81.6	1,077	83.3	1,409	89.6	1,498	81.6
Access off campus by primary clientele	2,851	83.7	1,791	84.7	481	89.4	781	86.3	527	78.7	1,060	82.0	1,390	88.4	1,461	79.6
Access off campus by others	2,782	81.6	1,746	82.6	465	86.4	762	84.2	517	77.2	1,036	80.1	1,355	86.1	1,427	77.8
Electronic full text course reserves																
Access from within library	3,115	91.4	1,938	91.6	495	92.0	842	93.0	599	89.4	1,177	91.0	1,481	94.2	1,634	89.0
Access from elsewhere on campus	2,857	83.8	1,786	84.4	470	87.4	789	87.2	525	78.4	1,071	82.8	1,395	88.7	1,462	79.7
Access off campus by primary clientele	2,781	81.6	1,742	82.4	468	87.0	756	83.5	516	77.0	1,039	80.4	1,358	86.3	1,423	77.5
Access off campus by others	2,751	80.7	1,725	81.6	462	85.9	756	83.5	505	75.4	1,026	79.4	1,342	85.3	1,409	76.8
Electronic files other than catalog																
Access from within library	3,132	91.9	1,948	92.1	499	92.8	840	92.8	607	90.6	1,184	91.6	1,491	94.8	1,641	89.4
Access from elsewhere on campus	2,861	83.9	1,789	84.6	472	87.7	786	86.9	529	79.0	1,072	82.9	1,402	89.1	1,459	79.5
Access off campus by primary clientele	2,795	82.0	1,756	83.0	469	87.2	766	84.6	519	77.5	1,039	80.4	1,367	86.9	1,428	77.8
Access off campus by others	2,767	81.2	1,737	82.1	467	86.8	758	83.8	510	76.1	1,030	79.7	1,356	86.2	1,411	76.9
Internet access																
Access from within library	3,170	93.0	1,975	93.4	504	93.7	854	94.4	615	91.8	1,195	92.4	1,511	96.1	1,659	90.4
Access from elsewhere on campus	2,941	86.3	1,839	87.0	479	89.0	807	89.2	551	82.2	1,102	85.2	1,436	91.3	1,505	82.0
Access off campus by primary clientele	2,842	83.4	1,785	84.4	472	87.7	779	86.1	532	79.4	1,057	81.7	1,389	88.3	1,453	79.2
Access off campus by others	2,752	80.8	1,719	81.3	454	84.4	754	83.3	509	76.0	1,033	79.9	1,348	85.7	1,404	76.5
Library reference service by e-mail																
Access from within library	3,132	91.9	1,952	92.3	500	92.9	844	93.3	606	90.4	1,180	91.3	1,494	95.0	1,638	89.3
Access from elsewhere on campus	2,890	84.8	1,815	85.8	480	89.2	793	87.6	540	80.6	1,075	83.1	1,408	89.5	1,482	80.8
Access off campus by primary clientele	2,824	82.9	1,775	83.9	474	88.1	774	85.5	525	78.4	1,049	81.1	1,380	87.7	1,444	78.7
Access off campus by others	2,762	81.0	1,731	81.8	457	84.9	759	83.9	513	76.6	1,031	79.7	1,352	86.0	1,410	76.8
Capacity to place interlibrary loan/doc deliv requests electronically																
Access from within library	3,147	92.3	1,959	92.6	503	93.5	843	93.1	611	91.2	1,188	91.9	1,502	95.5	1,645	89.6
Access from elsewhere on campus	2,883	84.6	1,807	85.4	481	89.4	788	87.1	536	80.0	1,076	83.2	1,413	89.8	1,470	80.1
Access off campus by primary clientele	2,818	82.7	1,763	83.4	473	87.9	765	84.5	523	78.1	1,055	81.6	1,386	88.1	1,432	78.0

NOTE: Caution should be exercised when using data at a level of detail where the response rate was less than 70 percent.
NOTE: EOFY = held at End Of Fiscal Year
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table A-1.- Number and percent of responding academic libraries by item and by level and control of institution: 1996 (continued)

	Total post-secondary degree-granting institutions	Pct responding	4-year institutions								Less than 4-year		Public		Private	
			Total 4-year institutions		Highest level of degree											
					Doctor's		Master's		Bachelor's							
			Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding	Total responding	Pct responding
Part G-Electronic services																
Capacity to place interlibrary loan/doc deliv requests electronically																
Access off campus by others	2,772	81.3%	1,737	82.1%	466	86.6%	756	83.5%	513	76.6%	1,035	80.0%	1,360	86.5%	1,412	76.9%
Electronic document delivery by the library to patron's account/address	3,140	92.1	1,948	92.1	496	92.2	841	92.9	609	90.9	1,192	92.2	1,501	95.4	1,639	89.3
Computers not dedicated to library functions for patron use inside library	3,170	93.0	1,972	93.2	503	93.5	852	94.1	615	91.8	1,198	92.7	1,512	96.1	1,658	90.4
Computer software for patron use inside the library	3,166	92.9	1,972	93.2	502	93.3	856	94.6	612	91.3	1,194	92.3	1,508	95.9	1,658	90.4
Technology in the library to assist patrons with disabilities	3,162	92.8	1,964	92.9	503	93.5	852	94.1	607	90.6	1,198	92.7	1,512	96.1	1,650	89.9
Instruction by library staff on use of Internet resources	3,176	93.2	1,974	93.3	504	93.7	854	94.4	614	91.6	1,202	93.0	1,518	96.5	1,658	90.4

NOTE: Caution should be exercised when using data at a level of detail where the response rate was less than 70 percent.
NOTE: EOFY = held at End Of Fiscal Year
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table A-2.- Number and percent of non-responding academic libraries by state, level and control of institution: 1996

	Total post-secondary degree-granting institutions	Pct	4-year institutions								Less than 4-year		Public		Private	
			Total 4-year institutions		Highest level of degree											
					Doctor's		Master's		Bachelor's							
			Total	Pct	Total	Pct	Total	Pct	Total	Pct	Total	Pct	Total	Pct	Total	Pct
Libraries with all items imputed	197	5.8%	115	5.4%	31	5.8%	39	4.3%	45	6.7%	82	6.3%	49	3.1%	148	8.1%
Alabama	1	1.5	1	2.9	0	.0	0	.0	1	8.3	0	.0	0	.0	1	4.3
Alaska	0	.0	0	.0	0	0	0	.0	0	0	0	.0	0	.0	0	.0
Arizona	0	.0	0	.0	0	0	0	.0	0	0	0	.0	0	.0	0	.0
Arkansas	0	.0	0	0	0	0	0	0	0	0	0	.0	0	0	0	0
California	35	11.0	26	14.8	7	14.9	15	16.7	4	10.5	9	6.4	4	2.9	31	17.4
Colorado	1	2.0	1	3.0	0	.0	1	11.1	0	0	0	.0	0	.0	1	4.3
Connecticut	0	.0	0	.0	0	0	0	0	0	.0	0	0	0	0	0	.0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District of Columbia	1	5.3	1	5.3	0	.0	1	9.1	0	0	0	0	0	0	1	6.2
Florida	6	5.8	2	3.0	1	6.2	0	.0	1	3.3	4	10.5	0	0	6	9.2
Georgia	12	12.1	4	7.4	2	14.3	1	4	1	6	8	17.8	6	10.5	6	14.3
Hawaii	0	.0	0	.0	0	.0	0	0	0	.0	0	0	0	.0	0	.0
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	10	6.1	8	7.6	2	6.2	1	3	5	11.6	2	3.4	0	0	10	9.7
Indiana	2	2.9	2	4.0	0	0	1	4.3	1	6.2	0	0	0	0	2	4.8
Iowa	2	3.4	2	5.0	1	17	0	0	1	5.0	0	.0	0	0	2	5.0
Kansas	0	.0	0	.0	0	0	0	0	0	.0	0	0	0	0	0	.0
Kentucky	0	.0	0	0	0	0	0	0	0	0	0	.0	0	0	0	.0
Louisiana	1	3	1	4	0	0	1	9	0	0	0	0	1	5	0	0
Maine	0	.0	0	.0	0	.0	0	0	0	0	0	.0	0	0	0	.0
Maryland	2	3.5	2	5.9	0	.0	0	.0	2	40	0	0	0	0	2	9.1
Massachusetts	0	.0	0	.0	0	.0	0	.0	0	0	0	0	0	0	0	.0
Michigan	7	6.7	4	5.8	1	8	0	.0	3	9.1	3	8.6	3	6.8	4	6.7
Minnesota	7	7.3	2	4.3	0	.0	1	5	1	5.6	5	10.2	4	7.4	3	7.1
Mississippi	0	.0	0	.0	0	0	0	.0	0	0	0	.0	0	.0	0	.0
Missouri	1	1.1	0	.0	0	.0	0	.0	0	.0	1	3.8	0	.0	1	1.7
Montana	4	17.4	1	9.1	0	0	0	.0	1	20	3	25	2	12	2	28.6
Nebraska	1	3.3	0	0	0	0	0	0	0	0	1	12.5	1	7	0	0
Nevada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Hampshire	4	14	3	18	0	0	2	25	1	17	1	9	1	9	3	18
New Jersey	10	18.2	6	20.7	5	45	1	8.9	0	0	4	15	4	12.5	6	26
New Mexico	0	.0	0	.0	0	0	0	.0	0	0	0	0	0	.0	0	0
New York	15	5.9	10	6.0	2	4.3	2	2.4	6	16.2	5	5.7	0	.0	15	8.9
North Carolina	1	.8	1	1.7	1	7	0	0	0	.0	0	0	0	.0	1	2
North Dakota	5	25	0	0	0	0	0	0	0	0	5	80	4	27	1	20
Ohio	23	16.8	14	15.9	5	23.8	5	13.5	4	13.3	9	18	10	18.5	13	15.7
Oklahoma	3	6.7	1	3.8	0	.0	0	.0	1	20	2	10.5	0	0	3	18.8
Oregon	4	8.3	3	9	2	25	1	6	0	0	1	6.7	4	18	0	.0
Pennsylvania	8	4.0	2	1.4	0	.0	1	1.5	1	2.0	6	10.7	0	.0	8	5.7
Rhode Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Carolina	2	3.2	1	2.8	0	0	0	0	1	7	1	4	0	.0	2	7
South Dakota	0	.0	0	.0	0	0	0	.0	0	0	0	0	0	.0	0	.0
Tennessee	8	6.6	3	5.6	1	7	0	.0	2	12.5	2	9.1	1	4	4	7.7
Texas	8	4.7	4	4.1	0	0	0	.0	4	18	4	5.3	1	1.0	7	10.1
Utah	2	13.3	0	0	0	0	0	0	0	0	2	28.6	1	10	1	20.0
Vermont	5	23.8	5	27.8	0	0	3	25.0	2	50	0	0	1	17	4	26.7
Virginia	5	6.1	4	7.8	1	6.2	2	12	1	5	1	3.2	0	0	5	11.6
Washington	1	2	0	0	0	0	0	0	0	0	1	3	0	0	1	4
West Virginia	1	4	0	0	0	0	0	0	0	0	1	25	0	0	1	9
Wisconsin	2	3.3	1	2.4	0	.0	0	0	1	12.5	1	5.0	1	3.3	1	3.2
Wyoming	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table A-3.- Total number of academic libraries by state, level, and control of institution: 1996

	Total post-secondary degree-granting institutions	4-year institutions				Less than 4-year	Public	Private
		Total 4-year institutions	Highest level of degree					
			Doctor's	Master's	Bachelor's			
Libraries	3,408	2,115	538	905	670	1,293	1,573	1,835
Alabama	68	35	9	14	12	33	45	23
Alaska	6	5	1	2	2	1	3	3
Arizona	41	19	3	7	9	22	22	19
Arkansas	44	20	4	8	8	24	32	12
California	317	176	47	90	38	141	139	178
Colorado	51	33	12	9	12	18	28	23
Connecticut	44	25	8	13	4	19	19	25
Delaware	9	6	2	4	0	3	5	4
District of Columbia	19	19	7	11	1	0	3	16
Florida	104	66	16	20	30	38	39	65
Georgia	99	54	14	24	16	45	57	42
Hawaii	16	9	3	3	3	7	9	7
Idaho	11	7	3	2	2	4	6	5
Illinois	164	105	32	30	43	59	61	103
Indiana	69	50	11	23	16	19	27	42
Iowa	59	40	6	14	20	19	19	40
Kansas	52	29	5	11	13	23	31	21
Kentucky	45	37	7	16	14	8	9	36
Louisiana	32	24	10	11	3	8	20	12
Maine	31	20	3	6	11	11	14	17
Maryland	57	34	9	20	5	23	35	22
Massachusetts	116	90	27	36	27	26	31	85
Michigan	104	69	12	24	33	35	44	60
Minnesota	96	47	7	22	18	49	54	42
Mississippi	40	21	7	7	7	19	26	14
Missouri	89	63	13	23	27	26	30	59
Montana	23	11	2	4	5	12	16	7
Nebraska	30	22	4	10	8	8	15	15
Nevada	9	4	2	0	2	5	6	3
New Hampshire	28	17	3	8	6	11	11	17
New Jersey	55	29	11	17	1	26	32	23
New Mexico	32	13	3	9	1	19	23	9
New York	255	168	47	84	37	87	86	169
North Carolina	120	58	14	20	24	62	74	46
North Dakota	20	10	2	2	6	10	15	5
Ohio	137	88	21	37	30	49	54	83
Oklahoma	45	26	6	15	5	19	29	16
Oregon	48	33	8	17	8	15	22	26
Pennsylvania	202	146	31	65	49	56	61	141
Rhode Island	12	11	6	3	2	1	3	9
South Carolina	62	36	8	13	15	26	33	29
South Dakota	20	18	4	9	5	2	9	11
Tennessee	76	54	14	24	16	22	24	52
Texas	172	97	40	35	22	75	103	69
Utah	15	8	3	3	2	7	10	5
Vermont	21	18	2	12	4	3	6	15
Virginia	82	51	16	16	19	31	39	43
Washington	64	29	5	16	8	35	40	24
West Virginia	27	23	2	8	13	4	16	11
Wisconsin	61	41	5	28	8	20	30	31
Wyoming	9	1	1	0	0	8	8	1

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table A-4.—Full-time-equivalent (FTE) enrollment and Education and General (E&G) expenditures in postsecondary degree-granting institutions having academic libraries, by control of institution and Carnegie Classification: 50 states and District of Columbia, 1990 and 1996

Institutional characteristics	Full-time-equivalent enrollment			Education and General (E&G) Expenditures		
	Number	Percent distribution	Percent change 1990-96	Amount in millions	Percent distribution	Percent change 1990-96 in constant dollars
Total	9,974,242	100.0%	6.1%	$154,855	100.0%	19.6%
Public	7,523,867	75.4	5.1	97,107	62.7	15.2
Private	2,450,374	24.6	9.3	57,748	37.3	29.4
Research I and II	2,278,757	22.8	1.1	62,142	40.1	15.9
Public	1,814,684	18.2	0.4	40,203	26.0	12.0
Private	464,073	4.7	3.9	21,939	14.2	25.0
Doctoral I and II	985,056	9.9	2.7	15,284	9.9	22.4
Public	730,514	7.3	2.4	9,380	6.1	14.7
Private	254,542	2.6	3.5	5,905	3.8	41.7
Master's I and II	2,356,924	23.6	5.9	26,490	17.1	16.8
Public	1,742,318	17.5	4.3	17,241	11.1	11.2
Private	614,606	6.2	10.5	9,249	6.0	29.8
Baccalaureate I and II	816,795	8.2	11.7	12,765	8.2	25.8
Public	179,971	1.8	9.1	1,714	1.1	18.1
Private	636,824	6.4	12.5	11,051	7.1	27.0
Associate of Arts	3,001,149	30.1	9.0	22,748	14.7	21.5
Public	2,844,689	28.5	9.0	19,998	12.9	21.0
Private	156,460	1.6	9.9	2,751	1.8	34.0
Specialized	369,706	3.7	14.6	13,011	8.4	29.5
Public	107,376	1.1	12.6	6,698	4.3	24.6
Private	262,330	2.6	15.4	6,312	4.1	37.6
Not Classified	165,855	1.7	6.6	2,414	1.6	25.8

NOTE: FTE enrollment and E&G expenditures are only for those postsecondary degree-granting institutions (3,408) having academic libraries. Calculations of percent change include only those institutions completing the library survey in both 1996 and 1990. FTE enrollment is calculated by taking one-third of part-time enrollment and adding the amount to full-time enrollment. Constant dollars calculated based on consumer price index as published in *1996 US Statistical Abstract*, table 745. Details may not sum to totals because of rounding.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Data Systems (IPEDS); "Academic Library Survey, 1990 and 1996," and "Fall Enrollment Survey, 1995" and "Finance Survey 1996."

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Appendix B: Detailed Tables

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Table B-1.- Total circulation and interlibrary loan transactions in academic libraries by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Circulation		Interlibrary loans	
		General collection	Reserve collection	Loans provided to other libraries	Loans received from other libraries
All postsecondary degree-granting institutions	3,408	186,544,558	44,188,834	9,430,907	7,512,105
Control					
Public	1,573	128,732,000	28,361,960	6,313,533	4,810,326
Private	1,835	57,812,558	15,826,874	3,117,374	2,701,779
Level [1]					
Total 4-year and above	2,115	160,516,886	37,317,318	8,756,400	6,778,747
Doctor's	538	110,358,495	24,097,646	6,129,983	4,215,172
Master's	905	38,736,227	9,717,080	2,005,843	1,876,581
Bachelor's	670	11,403,894	3,502,445	619,403	685,812
Less than 4-year	1,293	26,027,672	6,871,516	674,507	733,358
Size (FTE enrollment)					
Less than 1,500	1,839	25,282,367	6,312,556	1,195,514	1,155,267
1,500 to 4,999	1,011	39,166,064	10,442,027	2,173,388	2,055,581
5,000 or more	558	122,097,127	27,434,251	6,062,005	4,301,257
Carnegie classification (1994) [1]					
Research I and II	125	73,739,116	15,022,962	3,585,286	2,112,300
Doctoral I and II	110	18,302,979	4,757,429	1,279,733	1,166,347
Master's I and II	518	36,251,740	8,806,739	1,970,457	1,771,387
Baccalaureate I and II	599	16,316,603	5,032,066	960,405	1,068,793
Associate of Arts	1,182	24,373,778	6,778,084	646,204	689,885
Specialized	558	13,135,083	2,869,920	837,845	517,075
Not classified	316	4,425,259	921,634	180,977	186,318

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition*.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-2.- Public service hours per typical week and number of libraries by category of public service hours per typical week in academic libraries by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Public service hours per typical week							
		Total	Less than 20	20 to 39	40 to 59	60 to 79	80 to 99	100 to 119	120 or more
All postsecondary degree-granting institutions	3,408	258,651	28	72	466	1,490	957	315	80
Control									
Public	1,573	119,398	5	7	168	857	385	104	47
Private	1,835	139,253	23	65	298**	633	572	211	33
Level[1]									
Total 4-year and above	2,115	176,108	12	24	170	650	895	311	53
Doctor's	538	49,588	2	6	19	99	229	155	28
Master's	905	75,452	4	10	60	251	470	92	18
Bachelor's	670	50,947	6	8	90	299	196	64	7
Less than 4-year	1,293	82,543	16	48	296	840	62	4	27
Size (FTE enrollment)									
Less than 1,500	1,839	126,107	25	68	394	867	391	81	13
1,500 to 4,999	1,011	81,639	3	4	58	465	347	105	29
5,000 or more	558	50,905	0	0	14	158	219	129	38
Carnegie classification (1994)[1]									
Research I and II	125	13,373	0	1	1	1	32	72	18
Doctoral I and II	110	10,665	0	1	1	8	58	38	4
Master's I and II	518	46,342	0	0	6	89	351	60	12
Baccalaureate I and II	599	51,533	0	3	13	192	293	85	13
Associate of Arts	1,182	77,403	12	36	221	813	69	5	26
Specialized	558	40,653	7	15	95	248	137	50	6
Not classified	316	18,682	9	16	129	139	17	5	1

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition.*

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

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Table B-3.- Gate count and number of reference transactions per typical week, and total information service to groups, in academic libraries by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Gate count per typical week	Reference transactions, including computer searches per typical week	Information service to groups, fiscal year 1996	
				Total number of presentations	Total number served
All postsecondary degree-granting institutions	3,408	16,455,549	1,870,739	406,778	7,338,240
Control					
Public	1,573	11,206,119	1,314,731	278,638	5,487,665
Private	1,835	5,249,430	556,008	128,140	1,850,575
Level [1]					
Total 4-year and above	2,115	12,795,821	1,420,468	282,034	4,895,904
Doctor's	538	7,531,582	890,076	155,538	2,300,150
Master's	906	3,878,940	389,343	91,348	1,552,281
Bachelor's	670	1,383,006	140,694	35,118	1,043,197
Less than 4-year	1,293	3,659,728	450,271	124,744	2,442,336
Size (FTE enrollment)					
Less than 1,500	1,839	2,728,992	322,229	75,403	1,137,875
1,500 to 4,999	1,011	4,434,076	452,165	116,417	2,518,260
5,000 or more	558	9,292,481	1,096,345	214,968	3,682,105
Carnegie classification (1994) [1]					
Research I and II	125	4,151,669	485,419	82,870	1,225,543
Doctoral I and II	110	1,538,598	209,003	35,642	543,630
Master's I and II	518	3,775,454	396,821	84,227	1,477,134
Baccalaureate I and II	599	1,823,493	150,910	41,180	1,146,379
Associate of Arts	1,182	3,537,713	438,930	121,223	2,390,313
Specialized	558	1,236,017	119,974	26,933	342,538
Not classified	316	393,605	69,682	14,703	212,703

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition*.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-4.- Number of volumes of books, bound serials, and bound government documents held at the end of the year, and number of libraries by number of volumes by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Volumes held at end of year	Number of libraries in volume category									
			Less than 5,000	5,000 to 9,999	10,000 to 19,999	20,000 to 29,999	30,000 to 49,999	50,000 to 99,999	100,000 to 249,999	250,000 to 499,999	500,000 to 999,999	1,000,000 or more
All postsecondary degree-granting institutions	3,408	806,717,207	320	158	213	241	450	691	747	275	153	160
Control												
Public	1,573	469,863,888	43	57	77	145	297	362	231	146	106	109
Private	1,835	336,853,319	277	101	136	96	153	329	516	129	47	51
Level [1]												
Total 4-year and above	2,115	753,862,302	115	48	90	89	155	361	673	273	151	160
Doctor's	538	517,545,197	12	6	8	5	14	35	131	83	93	151
Master's	905	175,152,602	35	19	24	22	39	177	378	151	51	9
Bachelor's	670	61,076,696	68	23	58	61	102	148	164	39	7	0
Less than 4-year	1,293	52,854,905	205	110	123	152	295	330	74	2	2	0
Size (FTE enrollment)												
Less than 1,500	1,839	112,481,064	309	138	186	193	257	352	363	36	4	1
1,500 to 4,999	1,011	156,309,326	9	20	26	47	185	249	297	135	36	7
5,000 or more	558	537,926,817	2	0	1	1	8	90	87	104	113	152
Carnegie classification (1994) [1]												
Research I and II	125	352,060,127	0	0	0	0	0	0	1	1	10	113
Doctoral I and II	110	89,203,834	1	0	0	0	0	0	10	20	44	35
Master's I and II	518	161,988,226	1	0	3	4	3	47	211	164	76	9
Baccalaureate I and II	599	98,133,980	1	5	5	6	26	178	292	66	17	3
Associate of Arts	1,182	52,372,106	150	75	85	150	317	328	74	2	1	0
Specialized	558	43,081,619	50	33	67	60	82	116	126	21	3	0
Not classified	316	9,877,315	117	45	53	21	22	22	33	1	2	0

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition*.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-5.- Number of units and linear feet held at the end of the year and number of volumes, units, and linear feet added during the year by material collection category, in academic libraries by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Number held at the end of the year				Number added during the year				
		Physical units of microforms	Manuscripts and archives in linear feet	Cartographic materials units	Graphic materials units	Books and bound serials volumes	Physical units of microforms	Manuscripts and archives linear feet	Cartographic materials units	Graphic materials units
All postsecondary degree-granting institutions	3,408	1,015,714,047	4,310,700	33,879,852	95,860,437	21,346,078	38,172,955	223,131	658,490	1,951,563
Control										
Public	1,573	697,747,082	2,491,931	26,388,683	68,396,912	12,758,101	22,755,467	110,782	533,327	1,150,885
Private	1,835	317,966,965	1,818,769	7,491,169	27,463,525	8,587,977	15,417,488	112,349	125,163	800,678
Level [1]										
Total 4-year and above	2,115	971,527,449	4,180,961	33,603,085	92,376,480	19,371,834	35,940,374	217,637	647,541	1,876,702
Doctor's	538	651,660,202	3,035,392	29,300,258	80,556,839	13,057,752	21,231,259	155,663	516,402	1,571,261
Master's	905	287,024,715	861,434	3,506,648	8,792,286	4,631,815	12,523,020	44,118	99,075	203,228
Bachelor's	670	32,842,532	283,989	796,179	3,027,355	1,680,389	2,186,095	17,735	32,064	102,213
Less than 4-year	1,293	44,186,598	129,739	276,767	3,483,957	1,974,244	2,232,581	5,494	10,949	74,861
Size (FTE enrollment)										
Less than 1,500	1,839	80,204,611	653,369	928,644	7,267,796	3,279,195	4,675,441	42,372	41,000	208,258
1,500 to 4,999	1,011	215,946,068	621,658	2,973,992	8,569,344	4,431,502	10,175,857	30,687	89,245	226,864
5,000 or more	558	719,563,368	3,035,673	29,977,216	80,023,297	13,635,381	23,321,657	150,072	528,245	1,516,441
Carnegie classification (1994) [1]										
Research I and II	125	408,648,031	2,214,205	22,082,787	65,177,411	8,306,698	12,024,746	118,296	380,860	988,669
Doctoral I and II	110	146,521,773	490,468	5,308,330	11,467,513	2,657,387	5,193,057	20,498	91,903	469,271
Master's I and II	518	310,086,857	769,011	4,329,338	6,184,654	4,212,721	12,390,944	30,306	111,678	104,533
Baccalaureate I and II	599	66,719,356	415,604	1,437,008	3,256,036	2,589,481	4,430,813	19,246	49,895	84,541
Associate of Arts	1,182	42,968,771	128,058	256,096	3,502,834	1,911,097	2,218,800	4,538	10,084	73,647
Specialized	558	33,042,218	280,516	390,369	5,740,256	1,296,411	1,418,176	27,474	10,972	206,799
Not classified	316	8,737,041	42,838	76,934	532,733	402,283	496,419	2,777	3,098	24,103

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition.*
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-6.- Number of unduplicated titles held at the end of the year in academic libraries by material collection category, and by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Books and bound serials	Government documents not elsewhere classified	Current serial subscriptions	Microforms	Sound recordings [2]	Films and video materials	Computer files [2]
All postsecondary degree-granting institutions	3,408	449,178,927	67,313,520	5,708,762	181,203,010	9,206,407	3,915,855	982,508
Control								
Public	1,573	260,124,607	52,459,571	3,103,593	124,466,690	4,907,436	2,581,579	519,713
Private	1,835	189,054,320	14,853,949	2,605,169	56,736,320	4,298,971	1,334,276	462,795
Level [1]								
Total 4-year and above	2,115	405,179,686	65,590,567	5,216,492	177,152,350	8,002,142	2,527,678	733,435
Doctor's	538	241,833,138	39,358,293	3,623,873	97,369,914	4,519,089	1,100,426	489,329
Master's	905	118,172,798	22,485,351	1,203,406	72,341,589	2,456,987	1,027,510	153,769
Bachelor's	670	45,118,627	3,746,923	388,388	7,437,733	1,025,417	398,281	90,296
Less than 4-year	1,293	43,999,241	1,722,953	492,270	4,050,660	1,204,265	1,388,177	249,073
Size (FTE enrollment)								
Less than 1,500	1,839	84,439,736	5,892,851	999,065	21,703,156	2,323,405	1,040,329	322,981
1,500 to 4,999	1,011	108,723,032	16,807,021	1,133,969	53,636,991	2,414,565	1,388,997	201,349
5,000 or more	558	256,016,159	44,613,648	3,575,728	105,862,863	4,468,447	1,486,529	458,178
Carnegie classification (1994) [1]								
Research I and II	125	140,875,936	16,065,353	2,008,820	43,840,348	2,106,663	487,269	77,458
Doctoral I and II	110	53,706,766	12,218,113	998,028	21,631,811	1,187,958	246,788	98,522
Master's I and II	518	106,547,380	28,020,369	1,075,192	85,629,311	2,129,444	824,733	336,000
Baccalaureate I and II	599	69,778,026	6,416,372	616,846	16,518,713	1,592,736	582,861	69,200
Associate of Arts	1,182	43,533,176	1,713,380	472,045	3,942,835	1,172,546	1,335,057	222,171
Specialized	558	28,046,641	2,486,859	433,966	8,172,619	851,878	324,397	126,539
Not classified	316	6,691,002	393,074	103,865	1,467,373	165,182	114,750	82,618

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition.*

[2] 'Sound recordings' was previously labeled 'Audio materials,' and 'Computer files' was previously labeled 'Machine readable materials.'

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-7.- Number of unduplicated titles added during the year by material collection category, and by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Books and bound serials	Government documents not elsewhere classified	Current serial subscriptions	Microforms	Sound recordings [2]	Films and video materials	Computer files [2]
All postsecondary degree-granting institutions	3,408	12,332,877	2,744,646	274,118	7,331,345	337,259	420,848	158,275
Control								
Public	1,573	7,402,308	1,925,227	121,999	4,614,208	180,944	266,005	94,185
Private	1,835	4,930,569	819,419	152,119	2,717,137	156,315	154,843	64,090
Level [1]								
Total 4-year and above	2,115	10,890,843	2,562,597	239,869	7,125,281	306,596	301,438	113,498
Doctor's	538	6,732,673	1,304,045	99,152	3,506,445	176,061	125,070	67,540
Master's	905	2,896,372	1,090,485	118,344	3,234,292	83,090	129,523	37,104
Bachelor's	670	1,260,757	168,067	22,373	384,521	47,220	46,824	8,828
Less than 4-year	1,293	1,442,034	182,049	34,249	206,064	30,663	119,410	44,777
Size (FTE enrollment)								
Less than 1,500	1,839	2,224,541	289,498	67,518	1,199,403	87,499	134,444	75,420
1,500 to 4,999	1,011	3,025,562	950,157	106,038	2,388,006	74,058	130,470	34,324
5,000 or more	558	7,082,774	1,504,991	100,562	3,743,936	175,702	155,934	48,531
Carnegie classification (1994) [1]								
Research I and II	125	3,838,249	438,426	45,173	1,498,033	64,582	40,989	16,426
Doctoral I and II	110	1,599,764	471,680	31,032	869,345	75,639	27,771	10,289
Master's I and II	518	2,673,953	971,002	54,003	3,415,313	57,655	123,247	37,114
Baccalaureate I and II	599	1,698,606	272,245	69,144	935,894	64,314	63,175	15,121
Associate of Arts	1,182	1,391,549	177,970	31,682	204,730	29,511	112,718	36,400
Specialized	558	831,404	394,517	33,654	303,016	38,055	38,728	31,598
Not classified	316	299,352	18,806	9,430	105,014	7,503	14,220	11,327

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition*.

[2] 'Sound recordings' was previously labeled 'Audio materials,' and 'Computer files' was previously labeled 'Machine readable materials.'

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-8.- Number and percentage of FTE staff in academic libraries by staff category and by control, level, size, and Carnegie Classification: 1996

Institutional characteristic	Total number of libraries	Total FTE staff	Percent	Librarians and other professional		All other paid staff		Contributed service staff		Student assistants	
				FTE	Percent	FTE	Percent	FTE	Percent	FTE	Percent
All postsecondary degree-granting institutions	3,408	95,580	100.0%	27,268	28.5%	40,022	41.9%	291	0.3%	27,998	29.3%
Control											
Public	1,573	58,506	61.2	16,031	27.4	25,989	44.4	78	.1	16,407	28.0
Private	1,835	37,074	38.8	11,237	30.3	14,033	37.9	213	.6	11,591	31.3
Level [1]											
Total 4-year and above	2,115	81,589	85.4	23,143	28.4	33,991	41.7	216	.3	24,239	29.7
Doctor's	538	53,620	56.1	14,882	27.8	24,250	45.2	29	.1	14,459	27.0
Master's	905	20,402	21.3	6,059	29.7	7,390	36.2	120	.6	6,833	33.5
Bachelor's	670	7,562	7.9	2,198	29.1	2,342	31.0	66	.9	2,946	39.0
Less than 4-year	1,293	13,990	14.6	4,125	29.5	6,031	43.1	75	.5	3,759	26.9
Size (FTE enrollment)											
Less than 1,500	1,839	14,891	15.6	4,747	31.9	4,898	32.9	162	1.1	5,084	34.1
1,500 to 4,999	1,011	21,498	22.5	6,409	29.8	8,566	39.8	69	.3	6,454	30.0
5,000 or more	558	59,190	61.9	16,111	27.2	26,558	44.9	60	.1	16,461	27.8
Carnegie classification (1994) [1]											
Research I and II	125	33,400	34.9	9,134	27.3	15,778	47.2	7	.0	8,480	25.4
Doctoral I and II	110	10,301	10.8	2,854	27.7	4,344	42.2	5	0	3,099	30.1
Master's I and II	518	19,465	20.4	5,589	28.6	7,539	38.7	62	.3	6,305	32.4
Baccalaureate I and II	599	10,536	11.0	2,979	28.3	3,341	31.7	77	.7	4,139	39.3
Associate of Arts	1,182	13,353	14.0	3,986	29.9	5,824	43.6	69	.5	3,473	26.0
Specialized	558	6,349	6.6	2,071	32.6	2,500	39.4	45	.7	1,733	27.3
Not classified	316	2,175	2.3	685	31.5	696	32.0	26	1.2	768	35.3

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition*.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-9.- Total operating expenditures and number of libraries by category of total operating expenditures, by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Total operating expenditures	Number of libraries								
			Less than $20,000	$20,000 to $49,999	$50,000 to $99,999	$100,000 to $199,999	$200,000 to $299,999	$300,000 to $499,999	$500,000 to $999,999	$1,000,000 to $1,999,999	$2,000,000 or more
All postsecondary degree-granting institutions	3,408	$4,301,815,368	71	141	264	533	439	571	575	379	435
Control											
Public	1,573	2,629,996,839	2	9	53	208	199	279	309	216	298
Private	1,835	1,671,818,529	69	132	211	325	240	292	266	163	137
Level [1]											
Total 4-year and above	2,115	3,818,599,349	30	63	108	268	241	320	355	308	422
Doctor's	538	2,714,421,008	3	1	7	28	25	43	49	86	296
Master's	905	836,213,574	7	18	31	79	106	152	221	185	106
Bachelor's	670	266,939,482	20	44	70	160	110	125	84	37	20
Less than 4-year	1,293	483,216,019	41	78	156	265	198	251	220	71	13
Size (FTE enrollment)											
Less than 1,500	1,839	544,449,931	71	141	259	477	348	313	154	54	22
1,500 to 4,999	1,011	882,597,067	0	0	5	56	91	240	340	193	86
5,000 or more	558	2,874,768,370	0	0	0	0	0	18	81	132	327
Carnegie classification (1994) [1]											
Research I and II	125	1,780,260,273	0	0	0	0	0	0	1	0	124
Doctoral I and II	110	494,021,218	0	0	0	0	0	0	4	16	90
Master's I and II	518	810,453,374	0	0	0	4	19	54	128	178	135
Baccalaureate I and II	599	388,732,136	0	1	11	72	116	151	152	62	34
Associate of Arts	1,182	465,249,226	28	63	123	223	195	243	223	73	11
Specialized	558	283,334,485	14	37	80	131	78	77	60	45	36
Not classified	316	79,764,656	29	40	60	103	31	46	7	5	5

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition.*

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-10.- Library operating expenditures by object of expenditure, and salaries as a percentage of total operating expenditures, by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Total operating expenditures	Salaries and wages	Salaries and wages as a percentage of total operating expenditures	Information resources total [2]	Preservation	All other operating expenditures [3]
All postsecondary degree-granting institutions	3,408	$4,301,815,368	$2,147,841,900	49.9%	$1,499,248,832	$45,610,394	$609,114,308
Control							
Public	1,573	2,629,996,839	1,354,781,175	51.5	891,758,651	26,195,141	357,261,889
Private	1,835	1,671,818,529	793,060,725	47.4	607,490,181	19,415,253	251,852,419
Level [1]							
Total 4-year and above	2,115	3,818,599,349	1,833,412,211	48.0	1,396,291,340	44,708,786	544,187,060
Doctor's	538	2,714,421,008	1,266,920,171	46.7	1,010,512,589	35,087,896	401,900,359
Master's	905	836,213,574	431,734,182	51.6	293,735,688	7,212,352	103,531,377
Bachelor's	670	266,939,482	134,355,328	50.3	91,632,253	2,384,899	38,567,018
Less than 4-year	1,293	483,216,019	314,429,689	65.1	102,957,492	901,608	64,927,248
Size (FTE enrollment)							
Less than 1,500	1,839	544,449,931	277,957,778	51.1	182,298,583	4,455,842	79,737,778
1,500 to 4,999	1,011	882,597,067	461,964,496	52.3	294,486,555	6,764,151	119,381,881
5,000 or more	558	2,874,768,370	1,407,919,626	49.0	1,022,463,694	34,390,401	409,994,649
Carnegie classification (1994) [1]							
Research I and II	125	1,780,260,273	823,957,381	46.3	651,191,726	25,046,353	280,064,805
Doctoral I and II	110	494,021,218	226,701,746	45.9	201,286,057	5,561,512	60,471,904
Master's I and II	518	810,453,374	420,114,116	51.8	283,220,945	6,935,934	100,182,386
Baccalaureate I and II	599	388,732,136	190,349,583	49.0	141,532,639	4,063,302	52,786,627
Associate of Arts	1,182	465,249,226	304,401,544	65.4	99,617,823	898,691	60,331,192
Specialized	558	283,334,485	140,349,932	49.5	97,456,432	2,663,521	42,864,620
Not classified	316	79,764,656	41,967,598	52.6	24,943,210	441,081	12,412,774

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition*.

[2] 'Information resources total' most closely resembles the category 'Collection expenditures total' in the 1992 Academic Libraries E.D.-TABS report.

[3] 'All other operating expenditures' includes furniture and equipment, computer hardware and software, bibliographic utilities, networks, consortia, and all other operating expenditures.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-11.- Operating expenditures for information resources, equipment and other selected categories of expenditures by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Total number of libraries	Information resources total [2]	Books and bound serials	Current serial subscriptions	Microforms	Audiovisual materials	Computer files/search services [3]	Document delivery/inter-library loan [3]	Other information resources	Furniture and equipment [3]	Computer hardware and software	Bibliographic utilities, networks, consortia [3]	Other operating expenditures
All postsecondary degree-granting institutions	3,408	$1,499,248,832	$472,592,381	$780,829,819	$61,577,292	$28,879,323	$103,539,310	$17,644,832	$34,185,875	$56,127,578	$157,948,742	$85,113,418	$309,924,570
Control													
Public	1,573	891,758,651	265,738,952	486,186,639	34,043,863	17,449,508	57,795,046	10,782,704	19,761,939	36,116,065	97,151,611	45,116,837	178,877,376
Private	1,835	607,490,181	206,853,429	294,643,180	27,533,429	11,429,815	45,744,264	6,862,128	14,423,936	20,011,513	60,797,131	39,996,581	131,047,194
Level [1]													
Total 4-year and above	2,115	1,396,291,340	428,148,131	754,154,102	53,582,946	20,588,316	91,561,020	16,842,742	31,414,083	43,570,874	139,495,616	75,532,071	285,588,499
Doctor's	538	1,010,512,589	291,047,441	581,798,112	30,729,900	10,488,566	89,266,068	12,566,427	24,617,075	27,917,277	98,500,075	44,429,952	231,053,056
Master's	905	293,735,688	99,343,630	135,626,876	17,989,097	7,146,447	24,749,850	3,194,455	5,685,333	11,896,724	29,253,185	22,696,540	39,684,928
Bachelor's	670	91,632,253	37,659,363	36,523,808	4,863,889	2,943,484	7,459,938	1,071,212	1,110,569	3,742,547	11,611,075	8,388,953	14,824,443
Less than 4-year	1,293	102,957,492	44,444,250	26,675,717	7,994,346	8,291,007	11,978,290	802,090	2,771,792	12,556,704	18,453,126	9,581,347	24,336,071
Size (FTE enrollment)													
Less than 1,500	1,839	182,298,583	64,686,415	77,143,795	9,770,764	6,503,722	17,206,462	2,600,504	4,386,921	9,354,060	23,493,154	15,468,476	31,422,088
1,500 to 4,999	1,011	294,486,556	104,205,909	130,191,933	17,026,766	8,903,455	26,238,722	3,295,798	4,623,972	14,012,996	33,437,773	23,427,973	48,503,139
5,000 or more	558	1,022,463,694	303,700,057	573,494,091	34,779,762	13,472,146	60,094,126	11,748,530	25,174,982	32,760,522	101,017,815	46,216,969	229,999,343
Carnegie classification (1994) [1]													
Research I and II	125	651,191,726	188,026,497	380,527,029	17,484,217	5,370,608	33,909,375	7,854,130	18,019,870	16,817,923	63,347,348	24,420,837	175,478,697
Doctoral I and II	110	201,286,057	55,917,975	116,395,406	6,967,039	2,438,634	12,879,927	2,460,086	4,226,990	5,472,792	17,719,145	10,290,538	26,989,429
Master's I and II	618	283,220,945	94,440,361	135,368,000	16,654,943	6,256,620	22,819,799	3,098,085	4,594,137	11,763,456	28,916,660	19,782,394	39,719,876
Baccalaureate I and II	599	141,532,639	56,002,170	58,762,804	8,164,670	3,967,419	11,329,976	1,682,427	1,623,173	4,844,263	14,996,960	12,722,974	20,222,430
Associate of Arts	1,182	99,617,823	43,132,203	25,955,260	7,830,603	7,813,951	11,491,516	726,498	2,667,802	9,866,920	17,393,616	9,447,083	23,623,573
Specialized	658	97,456,432	25,841,660	53,686,514	3,317,776	1,956,108	8,788,715	1,567,828	2,297,834	3,850,962	12,098,879	6,695,080	20,219,699
Not classified	316	24,943,210	9,231,515	10,144,806	1,158,044	1,076,986	2,320,002	255,786	756,069	3,511,282	3,476,134	1,754,512	3,670,866

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition*.

[2] 'Information resources total' most closely resembles the category 'Collection expenditures total' in the 1992 Academic Libraries E.D.-TABS report.

[3] 'Computer files/search services' was formerly labeled 'Machine readable materials.' Both 'Document delivery/inter-library loan' and 'Bibliographic utilities, networks, consortia' were new categories in the 1994 survey. 'Computer hardware and software' was previously included in the category 'Furniture and equipment,' but was created as a separate category in 1994.

NOTE: This table presents all the separate categories of expenses included on the survey form except 'Salaries and wages' and 'Preservation.' Totals for these categories are included in Table B-10.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-12.- Percentage of responding institutions with selected electronic services, by control, level, size, and Carnegie Classification of institution: 1996

Institutional characteristic	Electronic catalog that includes the library's holdings				Electronic indexes and reference tools			
	Access from		Access off campus by		Access from		[1] Access off campus by	
	Within library	Elsewhere on campus	Primary clientele	Others	Within library	Elsewhere on campus	Primary clientele	Others
All postsecondary degree-granting institutions	79.9%	59.9%	58.5%	55.5%	91.2%	52.5%	43.0%	18.5%
Control								
Public	90.8	71.4	69.4	66.2	98.1	60.1	49.9	23.9
Private	69.9	49.1	48.1	45.3	84.9	45.4	36.3	13.3
Level [1]								
Total 4-year and above	82.4	67.7	66.6	63.5	92.8	62.0	53.1	20.6
Doctor's	92.9	84.0	86.4	83.3	97.6	81.2	75.5	27.3
Master's	83.3	70.6	69.4	65.5	94.4	61.1	51.0	20.6
Bachelor's	72.6	49.2	45.0	42.9	86.8	46.3	35.9	14.5
Less than 4-year	75.7	46.9	44.7	41.8	88.6	36.5	25.8	15.0
Size (FTE enrollment)								
Less than 1,500	67.2	39.1	38.0	35.8	84.5	37.5	28.6	13.4
1,500 to 4,999	91.2	74.8	71.3	67.3	98.1	60.1	47.1	19.7
5,000 or more	98.2	92.2	92.4	88.6	99.3	81.7	75.5	30.4
Carnegie classification (1994) [1]								
Research I and II	100.0	97.5	99.2	93.3	100.0	97.5	95.0	40.2
Doctoral I and II	100.0	98.1	100.0	98.1	100.0	93.1	91.1	36.1
Master's I and II	95.7	87.6	85.9	80.9	99.8	78.0	66.0	24.0
Baccalaureate I and II	83.2	68.1	65.4	62.7	97.2	58.3	47.7	18.9
Associate of Arts	77.2	49.5	46.5	43.4	89.9	37.2	26.1	15.1
Specialized	64.0	39.0	39.3	37.5	80.9	39.4	30.7	12.0
Not classified	66.1	31.1	30.7	29.9	78.0	35.9	30.3	13.7

See footnotes at end of table.

Table B-12.- Percentage of responding institutions with selected electronic services, by control, level, size, and Carnegie Classification of institution: 1996 (continued)

Institutional characteristic	Electronic full text periodicals				Electronic full text course reserves			
	Access from		Access off campus by		Access from		Access off campus by	
	Within library	Elsewhere on campus	Primary clientele	Others	Within library	Elsewhere on campus	Primary clientele	Others
All postsecondary degree-granting institutions	69.7%	38.1%	31.8%	11.0%	6.3%	5.1%	4.5%	1.7%
Control								
Public	84.0	47.0	38.6	14.5	7.0	5.9	5.5	2.0
Private	56.6	29.6	25.3	7.6	5.7	4.4	3.6	1.5
Level [1]								
Total 4-year and above	67.0	44.5	39.0	11.5	7.7	6.9	6.3	2.0
Doctor's	73.9	60.2	57.6	15.8	13.9	12.8	12.2	4.1
Master's	66.5	42.8	36.0	11.5	5.7	5.2	4.5	1.5
Bachelor's	61.9	33.0	26.6	7.8	5.3	4.4	3.7	1.0
Less than 4-year	74.2	27.4	19.8	10.1	4.0	2.1	1.5	1.3
Size (FTE enrollment)								
Less than 1,500	57.8	25.2	20.3	8.1	4.4	3.1	2.2	1.1
1,500 to 4,999	79.4	43.0	34.2	10.3	5.3	4.0	3.3	1.5
5,000 or more	88.5	65.7	59.6	20.4	14.0	12.9	13.2	4.1
Carnegie classification (1994) [1]								
Research I and II	96.7	85.6	83.8	26.7	31.6	28.9	26.1	6.2
Doctoral I and II	90.3	74.0	69.0	23.5	18.4	18.0	19.0	8.0
Master's I and II	79.0	54.5	46.7	12.5	6.4	5.6	5.3	1.9
Baccalaureate I and II	73.3	42.9	34.6	10.2	6.3	5.5	4.6	1.4
Associate of Arts	75.0	27.6	20.2	10.3	4.2	2.3	1.8	1.4
Specialized	38.6	22.0	19.0	5.6	3.4	2.8	1.9	.7
Not classified	59.8	28.8	24.7	8.8	4.2	2.4	1.5	.0

See footnotes at end of table.

Table B-12.- Percentage of responding institutions with selected electronic services, by control, level, size, and Carnegie Classification of institution: 1996 (continued)

Institutional characteristic	Electronic files other than the catalog				Internet access			
	Access from		Access off campus by		Access from		Access off campus by	
	Within library	Elsewhere on campus	Primary clientele	Others	Within library	Elsewhere on campus	Primary clientele	Others
All postsecondary degree-granting institutions	38.1%	28.1%	26.4%	24.0%	80.9%	76.9%	50.4%	23.9%
Control								
Public	42.8	32.3	30.3	28.2	86.6	85.2	56.8	28.5
Private	33.8	24.1	22.6	19.9	75.6	69.0	44.3	19.6
Level [1]								
Total 4-year and above	45.1	36.7	35.2	31.8	84.2	81.2	60.9	28.0
Doctor's	63.7	57.8	55.9	52.2	90.3	88.7	77.8	39.0
Master's	43.8	34.1	32.4	29.2	86.4	84.1	60.8	26.7
Bachelor's	31.5	21.7	20.6	17.3	76.3	70.6	46.1	20.4
Less than 4-year	26.5	13.7	11.5	10.7	75.3	69.7	32.6	17.1
Size (FTE enrollment)								
Less than 1,500	27.0	14.5	13.3	11.1	72.6	65.6	34.5	15.7
1,500 to 4,999	41.6	32.1	29.4	26.8	87.5	86.4	59.1	27.6
5,000 or more	65.4	59.1	57.1	54.5	94.1	92.1	79.1	40.8
Carnegie classification (1994) [1]								
Research I and II	90.8	83.1	81.2	73.5	99.2	96.5	93.9	50.5
Doctoral I and II	75.5	75.0	72.3	72.3	95.2	98.0	92.1	48.0
Master's I and II	51.3	44.6	42.3	38.8	92.9	94.3	74.1	32.8
Baccalaureate I and II	45.6	34.5	32.4	28.7	87.1	84.9	61.8	27.6
Associate of Arts	26.5	14.2	11.8	11.0	76.6	70.8	34.2	18.2
Specialized	27.7	16.8	15.2	13.2	70.2	60.9	35.0	14.9
Not classified	25.5	11.4	11.9	8.8	67.8	58.4	31.3	14.7

See footnotes at end of table.

Table B-12.- Percentage of responding institutions with selected electronic services, by control, level, size, and Carnegie Classification of institution: 1996 (continued)

Institutional characteristic	Library reference service by e-mail				Capacity to place interlibrary loan/document delivery requests electronically			
	Access from		Access off campus by		Access from		Access off campus by	
	Within library	Elsewhere on campus	Primary clientele	Others	Within library	Elsewhere on campus	Primary clientele	Others
All postsecondary degree-granting institutions	40.1%	38.8%	36.4%	22.5%	60.0%	31.6%	30.6%	11.5%
Control								
Public	40.5	38.9	35.5	24.0	65.1	36.4	34.2	14.5
Private	39.7	38.6	37.2	21.1	55.3	27.0	27.1	8.7
Level[1]								
Total 4-year and above	47.4	48.1	47.0	28.0	62.7	40.6	40.0	12.8
Doctor's	63.6	64.8	66.7	43.3	72.6	57.8	58.6	20.0
Master's	45.1	45.9	43.8	23.7	60.1	37.1	37.0	11.0
Bachelor's	37.3	36.5	34.1	20.7	58.3	30.6	27.7	9.2
Less than 4-year	27.9	23.0	18.3	13.3	56.5	16.4	14.9	9.4
Size (FTE enrollment)								
Less than 1,500	35.2	31.4	28.9	18.9	55.5	19.5	19.5	8.7
1,500 to 4,999	40.0	41.5	37.6	21.4	62.3	35.8	33.4	12.5
5,000 or more	55.2	54.6	55.1	34.4	69.3	58.3	56.1	17.8
Carnegie classification (1994)[1]								
Research I and II	84.9	86.3	88.8	57.5	80.0	76.1	75.2	23.5
Doctoral I and II	56.7	60.8	64.7	41.1	73.8	72.5	69.0	20.4
Master's I and II	49.3	49.9	47.0	26.0	64.9	48.0	47.1	11.9
Baccalaureate I and II	46.3	48.3	45.6	25.3	65.6	40.3	38.3	10.6
Associate of Arts	27.9	23.5	18.4	13.5	56.2	17.0	15.5	9.1
Specialized	40.8	37.7	38.9	24.8	55.8	21.3	22.7	13.8
Not classified	31.2	27.7	25.6	17.1	46.6	18.8	17.4	8.8

See footnotes at end of table.

Table B-12.- Percentage of responding institutions with selected electronic services, by control, level, size, and Carnegie Classification of institution: 1996 (continued)

Institutional characteristic	Electronic document delivery by the library to patron's account/address	Computers not dedicated to library functions for patron use inside the library	Computer software for patron use inside the library	Technology in the library to assist patrons with disabilities	Instruction by library staff on use of Internet resources
All postsecondary degree-granting institutions	16.5%	63.4%	60.5%	42.1%	75.4%
Control					
Public	19.0	62.8	58.0	62.0	82.3
Private	14.2	64.0	62.7	23.8	69.1
Level [1]					
Total 4-year and above	19.6	66.5	62.9	39.5	78.9
Doctor's	24.8	72.4	64.3	59.4	89.1
Master's	19.9	63.3	59.9	39.6	81.1
Bachelor's	14.8	66.2	65.8	22.9	67.4
Less than 4-year	11.4	58.3	56.5	46.4	69.6
Size (FTE enrollment)					
Less than 1,500	12.7	65.3	64.8	23.4	65.9
1,500 to 4,999	17.3	57.8	54.4	52.1	82.3
5,000 or more	26.4	67.7	58.3	80.8	91.9
Carnegie classification (1994) [1]					
Research I and II	33.3	81.5	67.2	90.8	100.0
Doctoral I and II	33.3	70.2	63.7	73.5	97.1
Master's I and II	22.4	63.2	59.0	58.6	90.9
Baccalaureate I and II	20.2	64.9	61.8	28.2	80.8
Associate of Arts	10.8	57.4	55.5	48.1	69.6
Specialized	12.0	68.7	67.0	17.7	60.3
Not classified	15.5	65.6	65.1	25.5	66.7

[1] While 'level' and 'Carnegie classification' are similar, there is not complete overlap in the two classifications. 'Level' refers to the highest level of any degree offered by the institution. The 'Carnegie classification' is based on criteria such as institution mission and research funding in addition to highest level of degree awarded. The Carnegie classification was developed by the Carnegie Foundation for the Advancement of Teaching and published in *A Classification of Institutions of Higher Education, 1994 Edition.*

NOTE: Total number of institutions responding to each question is shown in Table A

NOTE: This is a new table in the 1996 Academic Libraries E.D.-TABS report, reflecting the addition of the Electronic Services section to the 1996 IPEDS Academic Library Survey.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996."

Table B-13a.- Academic library circulation per full-time-equivalent (FTE) enrollment, by level and control of institution, United States: 1996

	Total post-secondary degree-granting institutions	4-year institutions				Less than 4-year	Public	Private
		Total 4-year institutions	Highest level of degree					
			Doctor's	Master's	Bachelor's			
General circulation per FTE student [1]								
Lower quartile	5.8	9.1	12.7	8.7	7.0	3.5	5.3	6.8
Median	11.6	16.6	21.0	15.4	14.8	6.5	9.2	15.4
Upper quartile	22.6	30.0	41.6	24.5	29.1	11.3	16.4	30.5
Reserve circulation per FTE student [1]								
Lower quartile	.8	1.6	2.5	1.6	.9	.3	.8	.9
Median	2.6	3.7	4.8	3.5	3.0	1.3	2.1	3.2
Upper quartile	5.8	7.7	8.7	6.5	8.4	2.9	4.2	8.2
Total circulation per FTE student [1]								
Lower quartile	7.8	12.5	17.5	12.2	9.8	4.8	7.0	9.4
Median	15.0	21.5	28.0	19.2	19.3	8.4	11.9	19.7
Upper quartile	29.2	38.1	52.6	32.1	37.1	14.2	20.4	40.7

[1] FTE enrollment is calculated by adding one-third of part-time enrollment to full-time enrollment.
NOTE: Twenty-five percent of institutions fall into each quartile grouping. All institutions in the lower quartile were at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had 5.8 or fewer general circulation transactions per FTE student.
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

Table B-13b.- Number of books and bound serials volumes held at the end of the year, and added during the year by academic libraries per full-time-equivalent (FTE) student, by level and control of institution, United States: 1996

	Total post-secondary degree-granting institutions	4-year institutions				Less than 4-year	Public	Private
		Total 4-year institutions	Highest level of degree					
			Doctor's	Master's	Bachelor's			
Volumes held per FTE student [1]								
Lower quartile	20.8	56.9	68.2	55.2	43.9	11.4	16.4	36.8
Median	58.2	92.1	111.2	81.2	94.9	19.0	31.7	91.4
Upper quartile	118.8	165.2	208.1	142.2	167.1	31.9	64.2	184.1
Volumes added per FTE student [1]								
Lower quartile	.6	1.2	1.8	1.1	1.0	.3	.5	1.1
Median	1.5	2.3	2.8	1.9	2.3	.6	.9	2.3
Upper quartile	3.2	4.4	5.4	3.8	4.4	1.2	1.8	4.8

[1] FTE enrollment is calculated by adding one-third of part-time enrollment to full-time enrollment.

NOTE: Twenty-five percent of institutions fall into each quartile grouping. All institutions in the lower quartile were at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had 20.8 or fewer volumes held per FTE student.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

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Table B-13c.- Total academic library staff, except student assistants, per 1,000 full-time-equivalent (FTE) students, by level and control of institution, United States: 1996

	Total post-secondary degree-granting institutions	4-year institutions				Less than 4-year	Public	Private
		Total 4-year institutions	Highest level of degree					
			Doctor's	Master's	Bachelor's			
Total staff per 1,000 FTE students [1]								
Lower quartile	3.6	5.1	6.2	4.8	4.9	2.5	3.0	5.2
Median	5.8	7.5	9.5	6.5	7.8	3.6	4.3	8.2
Upper quartile	9.9	12.4	16.4	10.6	11.7	5.4	6.0	13.9

[1] FTE enrollment is calculated by adding one-third of part-time enrollment to full-time enrollment.
NOTE: Twenty-five percent of institutions fall into each quartile grouping. All institutions in the lower quartile were at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had 3.6 or fewer total staff per 1,000 FTE students.
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

Table B-13d.- Total operating expenditures for academic libraries, information resources, and serials expenditures per full-time-equivalent (FTE) student, by level and control of institution, United States: 1996

	Total post-secondary degree-granting institutions	4-year institutions				Less than 4-year	Public	Private
		Total 4-year institutions	Highest level of degree					
			Doctor's	Master's	Bachelor's			
Total operating expenditures per FTE student [1]								
Lower quartile	$179.06	$287.00	$399.50	$273.57	$244.38	$117.17	$144.22	$259.06
Median	$310.22	$420.50	$606.00	$366.00	$381.50	$170.71	$220.50	$417.25
Upper quartile	$531.60	$702.50	$1,109.00	$565.50	$595.25	$249.40	$338.90	$753.25
Expenditures for information resources per FTE student [1, 2]								
Lower quartile	$42.34	$85.25	$142.25	$81.06	$64.19	$21.92	$30.72	$68.44
Median	$90.07	$136.57	$220.75	$116.40	$113.65	$37.25	$57.71	$126.25
Upper quartile	$178.14	$249.50	$391.50	$202.17	$199.25	$62.00	$109.16	$252.31
Expenditures for current serials per FTE student [1]								
Lower quartile	$9.27	$26.99	$64.38	$27.78	$17.14	$4.84	$7.27	$15.73
Median	$27.96	$51.75	$115.55	$45.05	$35.56	$8.74	$15.30	$40.48
Upper quartile	$69.62	$107.85	$190.25	$78.62	$64.16	$15.16	$46.91	$89.88

[1] FTE enrollment is calculated by adding one-third of part-time enrollment to full-time enrollment.
[2] 'Information resources' most closely resembles the category 'Collection expenditures' in the 1992 Academic Libraries E.D.-TABS report.
NOTE: Twenty-five percent of institutions fall into each quartile grouping. All institutions in the lower quartile were at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had total operating expenditures per FTE student of $179.06 or less.
SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Fall Enrollment Survey, 1995."

Table B-13e.- Academic library expenditures as a percentage of Education and General (E&G) expenditures; and expenditures for information resources, current serials, and salaries and wages as a percentage of total library operating expenditures, by level and control of institution, United States: 1996

	Total post-secondary degree-granting institutions	4-year institutions				Less than 4-year	Public	Private
		Total 4-year institutions	Highest level of degree					
			Doctor's	Master's	Bachelor's			
Total operating expenditures as percentage of E&G expenditures								
Lower quartile	1.9%	2.2%	2.3%	2.3%	2.0%	1.5%	1.8%	2.0%
Median	2.7%	2.9%	3.1%	2.9%	2.8%	2.2%	2.5%	2.8%
Upper quartile	3.6%	4.0%	4.2%	3.9%	4.0%	3.0%	3.2%	4.3%
Expenditures for information resources as a percentage of total operating expenditures [1]								
Lower quartile	21.8%	26.6%	31.4%	26.7%	23.3%	16.9%	20.2%	23.5%
Median	29.8%	33.7%	37.0%	33.0%	31.1%	23.1%	27.6%	31.7%
Upper quartile	37.6%	40.1%	42.3%	39.7%	38.4%	29.6%	35.3%	39.4%
Expenditures for current serials as a percentage of total information resources expenditures								
Lower quartile	21.6%	26.6%	37.3%	26.9%	21.7%	17.5%	21.6%	21.5%
Median	33.0%	40.6%	54.0%	39.0%	33.9%	25.0%	32.1%	33.8%
Upper quartile	48.4%	54.1%	65.1%	51.3%	45.7%	33.4%	51.7%	47.0%
Salaries and wages as a percentage of total operating expenditures								
Lower quartile	46.3%	44.2%	42.1%	45.0%	45.5%	53.5%	49.1%	44.3%
Median	54.7%	50.9%	47.6%	52.7%	52.5%	62.7%	57.6%	52.1%
Upper quartile	65.0%	59.3%	53.0%	60.4%	62.7%	72.1%	67.4%	62.0%

[1] 'Information resources' most closely resembles the category 'Collection expenditures' in the 1992 Academic Libraries E.D.-TABS report.

NOTE: Twenty-five percent of institutions fall into each quartile grouping. All institutions in the lower quartile were at or below the number given in the table for the lower quartile and all institutions in the upper quartile were at or above the upper quartile number. For example, all institutions within the lower quartile had total operating expenditures as a percentage of E&G expenditures of 1.9 percent or less.

SOURCE: United States Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), "Academic Library Survey, 1996" and "Finance Survey, 1996."

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Appendix C: Academic Library Indicators

Indicators for Academic Library Performance:
Ratios from the Association of Research Libraries Statistics
1994-95

Taken from the Association of Research Libraries: http://www.arl.org/stats/arlstat/indi96.html, and http://www.arl.org/stats/arlstat/index.html#indicato

Ratio 1: Professional Staff as a Percentage of Total Staff
Ratio 2: Support Staff as a Percentage of Total Staff
Ratio 3: Student Assistants as a Percentage of Total Staff
Ratio 4: Ratio of Support to Professional Staff
Ratio 5: Items Loaned over Items Borrowed
Ratio 6: Serials Expenditures over Materials Expenditures
Ratio 7: Library Materials Expenditures over Total Expenditures
Ratio 8: Binding Expenditures over Total Expenditures
Ratio 9: Salary Expenditures over Total Expenditures
Ratio 10: Operating Expenditures over Total Expenditures
Ratio 11: Unit Price of Monographs
Ratio 12: Unit Price of Serials
Ratio 13: Items Borrowed per Faculty
Ratio 14: Total Expenditures per Faculty
Ratio 15: Volumes Added (Gross) per Faculty
Ratio 16: Volumes Held per Faculty
Ratio 17: Paid Serial Subscriptions per Faculty
Ratio 18: Monographs Purchased per Faculty
Ratio 19: Number of Faculty per Library Staff Member
Ratio 20: Expenditures for Library Materials per Faculty
Ratio 21: Expenditures for Serials per Faculty
Ratio 22: Items Borrowed per Student
Ratio 23: Total Expenditures per Student
Ratio 24: Volumes Added (Gross) per Student
Ratio 25: Volumes Held per Student
Ratio 26: Paid Serial Subscriptions per Student
Ratio 27: Monographs Purchased per Student
Ratio 28: Number of Students per Library Staff
Ratio 29: Expenditures for Library Materials per Student
Ratio 30: Expenditures for Serials per Student

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Appendix D: Survey Questionnaire (Including Instructions and Definitions)

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OMB No. 1850-0582: Approval Expires 04/30/98

FORM IPEDS-L
(8-1-96)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR THE
U.S. DEPARTMENT OF EDUCATION
NATIONAL CENTER FOR EDUCATION STATISTICS

INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM

ACADEMIC LIBRARIES SURVEY 1996

NOTE – The completion of this survey, in a timely and accurate manner, is **MANDATORY** for all institutions which participate or are applicants for participation in any Federal financial assistance program authorized by Title IV of the Higher Education Act of 1965, as amended. The completion of this survey is mandated by 20 U.S.C. 1094(a)(17).

For those institutions not required to complete this survey on the basis of the above requirements, the completion of this survey is voluntary and authorized by P.L. 103-382, National Education Statistics Act of 1994, Sec. 404(a).

Please read the accompanying instructions before completing this survey form. Report data ONLY for the institution in the address label. If data for any other institutions or branch campuses are included in this report because they CANNOT be reported separately, please provide a list of these schools.

Please correct any errors in the name, address, and ZIP Code.

If there are any questions about this form, contact a Bureau of the Census IPEDS representative at (800) 451-6236 or FAX number (301) 457-1542, 7:30 a.m.—4:30 p.m. EST.

RETURN TO

Data due: November 15, 1996

1. Name of respondent	2. Title of respondent	3. Telephone Area code, number, extension
		FAX number
4. E-Mail address		

Does your institution have its own library, report with another institution or are you financially supporting a shared library with another institution?

1 ☐ Has own library as defined in Part A of the instructions. — *Please complete this survey.*

2 ☐ Has own library but reports with another library — *Go to Combined Data sheet, page 4*

3 ☐ Does not have own library but contributes financial support to a shared library with the following postsecondary institution(s). A shared library is a facility housing an organized collection of printed, microform, and audiovisual materials, and (a) is jointly administered by more than one educational institution, or (b) whose funds or operating expenditures have been received from more than one educational institution. The location of the facility is not a determining factor. — *Please complete the item below and return blank survey form to the address shown above.*

UNITID	Name of Institution

4 ☐ Does not have own library — *Please return this blank survey to the address shown above*

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Changes from the 1994 form for

1996 ACADEMIC LIBRARIES SURVEY

▷ **Cover sheet — Own library question**

The question has been expanded to allow for combined or shared library systems.

▷ **Part E — Library Services, Fiscal Year 1996**

Data requests for document delivery/interlibrary loans provided to other libraries, as well as those received from other libraries or commercial services, have been expanded to request separate reporting for returnables and non-returnables, as well as the total.

▷ **Part G — Electronic Services**

This part was added to identify the availability of electronic services within the library system. The questions require a "yes" or "no" response to the availability of the various services listed.

PURPOSE OF THE SURVEY

The National Center for Education Statistics (NCES) collects these data periodically to obtain and report a comprehensive picture on the status of collections, transactions, staff, service per typical week, and library operating expenditures in postsecondary institutions. The survey is being conducted in compliance with the Center's mission "to collect, and analyze, and disseminate statistics and other data related to education in the United States . . .", (P.L. 103–382, National Education Statistics Act of 1994, Sec. 404(a)).

USES OF DATA

Collection of these data over time will enable the nation to plan effectively for the development and use of postsecondary education library resources. Congress uses the data to assess the need for revisions of existing legislation concerning libraries and the allocation of Federal funds. Federal agencies need the data to evaluate and administer library programs. State education agencies and college librarians and administrators use the data for regional and national comparisons of library resources to plan for the effective use of funds. Finally, library associations and researchers use the survey results to determine the status of library operations and the profession.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1850-0582. The time required to complete this information collection is estimated to vary from 30 minutes to 6.0 hours per response, with an average of 2.5 hours, including the time to review instructions, search existing data resources, gather and maintain the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Information Management Team, Washington, DC 20202-4652. If you have any comments or concerns regarding the status of your individual submission of this form, write directly to:

National Center for Education Statistics/IPEDS
U.S. Department of Education
555 New Jersey Avenue, NW
Washington, DC 20208-5652

The definitions and instructions for compiling IPEDS data have been designed to minimize comparability problems. However, postsecondary education institutions differ widely among themselves. As a result of these differences, comparisons of data provided by individual institutions may be misleading.

DO NOT RETURN INSTRUCTIONS

REMARKS SECTION — *Please enter any remarks you may have in this section. By entering any explanations here, you may eliminate the need for telephone contact at a later date.*

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FORM IC3-L-1.1-96

NOTICE OF COMBINED DATA FOR MORE THAN ONE INSTITUTION OR BRANCH

CN

The institution named on this report is including Libraries Survey data for other institutions/branches.

☐ No
☐ Yes — *Please indicate below, the UNITID (if known), name and address of the institutions for which data are included.*

UNITID	Institution name	Address	City	State	ZIP Code

The Libraries Survey data for this institution are reported by another institution.

☐ No
☐ Yes — *Please list the UNITID, name, and address of the reporting institution.*

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UNITID	Institution name	Address	City	State	ZIP Code

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L

Part A — NUMBER OF PUBLIC SERVICE OUTLETS, FISCAL YEAR 1998

Line No.	Item	Number
01	Branch and independent libraries — *Exclude main or central library.*	

Part B — LIBRARY STAFF, FALL 1998
(Exclude maintenance and custodial staff.)

NOTE: Report data to two decimals.

Line No.	Staff	Number of full-time equivalents
02	Librarians and other professional staff	
03	All other paid staff (except student assistants)	
04	Contributed services staff	
05	Student assistants from all funding sources	
06	Total full-time equivalent staff — *(Sum of lines 2 through 5)*	

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Part C — LIBRARY OPERATING EXPENDITURES, FISCAL YEAR 1998

L

NOTE: Do not report the same expenditures more than once.

Line No.	Category	Amount *(Whole dollars only)*
	Salaries and wages — *Exclude employee fringe benefits.*	
07	Librarians and other professional staff	$
08	All other paid staff (except student assistants)	
09	Student assistants	
	Information resources	
10	Books, serial backfiles, and other print materials — *Exclude current serials and all microforms.*	
11	Current serials — *Exclude microforms, audiovisual materials, and machine-readable materials.*	
12	Microforms — *Include current serials.*	
13	Audiovisual materials — *Include current serials.*	
14	*Computer files and search services — Include current serials.*	
15	Document delivery/interlibrary loan	
16	Other	
17	Preservation	
18	Furniture and equipment — *Exclude computer equipment.*	
19	Computer hardware and software — *Include maintenance.*	
20	Bibliographic utilities, networks, and consortia	
21	All other operating expenditures	
22	Total operating expenditures *(Sum of lines 7 through 21)*	$
23	Employee fringe benefits (if paid from the library budget)	$

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Part D — LIBRARY COLLECTIONS, FISCAL YEAR 1998

L

Line No.	Category	Total number — Added during fiscal year (1)	Total number — Held at end of fiscal year (2)
24	Books, serial backfiles, and government documents that are accessible through the library's catalog — *Include bound periodicals and newspapers and exclude microforms.* Volumes		
25	Titles		
26	Government documents — *Include government documents that are not reported elsewhere.* Units		
27	Titles		
28	Current serials — *Include periodicals, newspapers, and government documents.* Total number of paid and unpaid subscriptions		
29	Titles (number of unique titles)		
30	Microforms Units		
31	Titles		
32	Manuscripts and archives — Linear feet		
33	Cartographic materials — Units		
34	Graphic materials — Units		
35	Sound recordings Units		
36	Titles		
37	Film and video materials Units		
38	Titles		
39	Computer files Units		
40	Titles		
41	Other library materials — Units		

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Part E — LIBRARY SERVICES, FISCAL YEAR 1996

Line No.	Category	Number
	Circulation transactions	
42	General collection	
43	Reserve collection	
	Document delivery/interlibrary loans provided to other libraries	
44	Returnable	
45	Non-returnable	
46	Total	
	Document delivery/interlibrary loans received from other libraries or commercial services	
47	Returnable	
48	Non-returnable	
49	Total	
	Information service to groups	
50	Number of presentations	
51	Number of persons served in presentations	

Part F — LIBRARY SERVICES, TYPICAL WEEK, FALL 1996

Line No.	Category	Number
52	Public service hours in a typical week	
53	Gate count in a typical week	
54	Reference transactions in a typical week	

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Part G — ELECTRONIC SERVICES

L

This section requests information about the availability of electronic services in the library and elsewhere on campus and off campus access by your primary clientele, and other users. — *Please respond to each item by marking an (X) in the appropriate column.*

Line No.	Category	*Mark (X) appropriate column.*							
		Access from —				Access off campus by —			
		Within library (1)		Elsewhere on campus (2)		Primary clientele (3)		Others (4)	
		Yes	No	Yes	No	Yes	No	Yes	No
	Does the library or parent institution offer the following services?								
56	An electronic catalog that includes the library's holdings								
66	Electronic indexes and reference tools								
67	Electronic full text periodicals								
68	Electronic full text course reserves								
69	Electronic files other than the catalog (e.g., finding aids, indices, manuscripts) created by library staff								
70	Internet access								
71	Library reference service by e-mail								
72	Capacity to place interlibrary loan/document delivery requests electronically								
73	Electronic document delivery by the library to patron's account/address								
74	Computers not dedicated to library functions for patron use inside the library								
75	Computer software for patron use inside the library (e.g., word processing, spreadsheet, custom applications, etc.)								
76	Technology in the library to assist patrons with disabilities (e.g., TDD, specially equipped work stations)								
77	Instruction by library staff on use of Internet resources								

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GENERAL INSTRUCTIONS — L

Please respond to each item on this form in the space provided. If the appropriate answer is zero or none, use "0." If you do not collect data for an item, provide your best estimate. **PLEASE DO NOT LEAVE ANY LINES BLANK.** If a line is left blank, NCES will impute a figure using the average for institutions with similar characteristics. Include data for the main or central library and all branch and independent libraries that were open all or part of fiscal year 1996.

INSTITUTIONAL IDENTIFICATION

In the space provided on the front page of this report, make any necessary corrections to the preprinted address information. Also, please enter the name, title, area code and telephone number of the person responsible for completing the report.

PERIOD OF REPORT

Report information for the following time periods as specified in each section:

1. **Fiscal year 1996** — Any 12-month period between June 1, 1995 and September 30, 1996 which corresponds to your institution's fiscal year. (For Sections A, C, D, E)
2. **Typical week, Fall 1996** — A typical week is one that is neither unusually busy nor unusually slow. Avoid vacation periods for key staff or days when unusual events are taking place on the campus or in the library. Choose a week in which the library is open its regular hours. Include any seven consecutive calendar days. (Section F)
3. **Fall 1996** — The period during the fall of 1996 when the survey form is being completed. (Section B – Library Staff)

Part A — NUMBER OF PUBLIC SERVICE OUTLETS, FISCAL YEAR 1996

Library — An entity that provides all of the following:

1. An organized collection of printed or other materials, or a combination thereof;
2. A staff trained to provide and interpret such materials as required to meet the informational, cultural, recreational, or educational needs of clientele;
3. An established schedule in which services of the staff are available to clientele;
4. The physical facilities necessary to support such a collection, staff, and schedule.

This includes libraries that are part of learning resource centers.

Shared library – A facility housing an organized collection of printed, microform, and audiovisual materials, and (a) is jointly administered by more than one education institution, or (b) whose funds or operating expenditures have been received from more than one educational institution. The location of the facility is not a determining factor.

Branch and independent libraries (line 1) — Report the number of branch and independent libraries at your institution that were open all or part of FY 1996. EXCLUDE THE MAIN OR CENTRAL LIBRARY. Branch and independent libraries are defined as auxiliary library service outlets with quarters separate from the central library of an institution which have a basic collection of books and other materials, a regular staffing level, and an established schedule. Branch and independent libraries are administered either by the central library or, as in the case of some libraries (such as law, medical, etc.), through the administrative structure of other units within the university. Departmental study/reading rooms are not included. Include data for all branch and independent libraries on the campus. Include libraries on branch campuses (i.e., located in another community) if those campuses are registered under the same NCES UNITID number as the main campus.

Part B — LIBRARY STAFF, FALL 1996

Full-time equivalent (FTE) employee — Report the number of filled or temporarily vacant full-time equivalent (FTE) positions during Fall 1996 paid from funds under library control. To compute full-time equivalents of part-time employees and student assistants, take the TOTAL number of hours worked per week by part-time employees IN EACH CATEGORY and divide it by the number of hours CONSIDERED BY THE REPORTING LIBRARY TO BE A FULL-TIME WORK WEEK (e.g., 60 hours per week of part-time work divided by 40 hours per full-time week equals 1.5 FTE). Data should be reported to two decimal places.

Librarians and other professional staff (line 2) — Report the total FTE of librarians and other professional staff, including administrators. Report staff members doing work that requires professional education (the master's degree or its equivalent) in the theoretical and scientific aspects of librarianship; also, in some libraries, staff performing professional level tasks who, though not librarians, have equivalent education and training in related fields (e.g., archives, computer sciences, business administration, education).

All other paid staff (except student assistants) (line 3) — Report the total FTE of all other library staff who are paid annual salaries or hourly wages except students, who are reported on line 5. Include technical and clerical staff, but exclude maintenance and custodial staff.

Contributed services staff (line 4) — Report the total FTE for contributed services staff. Contributed services staff are those, such as members of religious orders, whose services are valued by bookkeeping entries rather than by full cash transactions. Do **not** include volunteers.

Student assistants from all funding sources (line 5) — Report the total FTE of student assistants, employed on an hourly basis whose wages are paid from funds under library control or from a budget other than the library budget, including College Work Study Program. Exclude maintenance and custodial staff.

Total FTE staff (line 6) — Report the sum of lines 2 through 5.

Part C — LIBRARY OPERATING EXPENDITURES, FISCAL YEAR 1996

Expenditures (lines 7-23) — Report funds expended by the library in fiscal year 1996 (regardless of when received) from its regular budget and from all other sources, e.g., research grants, special projects, gifts and endowments, and fees for services. If items in this section are not paid from the library budget but can be easily identified in other parts of the institution's budget, report them here. Expenditures should be reported for the 12-month period which corresponds to your library's fiscal year between the calendar period June 1, 1995, to September 30, 1996. All expenditures should be reported in whole dollars in the most appropriate category to provide an unduplicated count of expenditures. Exclude expenditures for new buildings and building renovation. DO NOT REPORT ANY EXPENDITURES MORE THAN ONCE.

REMOVE INSTRUCTIONS BEFORE MAILING AND RETAIN FOR YOUR FILES.

Part C — LIBRARY OPERATING EXPENDITURES, FISCAL YEAR 1996 — Continued

Salaries and wages (lines 7–9) — Report expenditures for full-time and part-time salaries and wages before deductions. Exclude employee fringe benefits provided by your institution for all regular library staff which may be reported on line 23. Include salaries and wages from all sources paid to students serving on an hourly basis. Federal funds paid to students in the College Work Study Program should be reported here. Exclude contributed services and maintenance and custodial staff.

Books, serial backfiles, and other print materials (line 10) — Report expenditures for all materials consisting primarily of words and usually produced by making an impression with ink on paper. Included in this category are materials that do not require magnification: books, government documents, braille materials, ephemeral print materials, and the like. Exclude current serial subscriptions and microforms.

Current serials (line 11) — Report expenditures for current subscriptions to serials. These are publications issued in successive parts, usually at regular intervals, and, as a rule, intended to be continued indefinitely. Serials include periodicals, newspapers, annuals (reports, yearbooks, etc.), memoirs, proceedings, and transactions of societies. Exclude expenditures for microforms, audiovisual materials, and machine-readable materials.

Microforms (line 12) — Report expenditures for all photographic reproductions of textual, tabular, or graphic materials reduced in size so that they can be used only with magnification. Examples of microforms are roll microfilm, microcard, microfiche, and ultrafiche. Include current serials.

Audiovisual materials (line 13) — Report expenditures for all library materials that are displayed by visual projection or magnification or through sound reproduction, or both, including graphic materials, audio materials, motion pictures, video materials, and special visual materials such as three-dimensional materials. Include current serials.

Computer files and search services (line 14) — Report expenditures for materials considered part of the collection, whether purchased or leased, such as CD-ROMs, magnetic tapes, and magnetic disks, that are designed to be processed by a computer or similar machine. Examples are U.S. Census data tapes, locally-mounted databases, electronic journals, and reference tools on CD-ROM, tape, or disk. Include current serials. Include expenditures for online searches of remote databases. Include expenditures for equipment when the cost is inseparably bundled into the price of the information service product. Exclude expenses for library system software and microcomputer software used only by the library staff which are reported on line 19.

Document delivery/interlibrary loan (line 15) — Report expenditures for document delivery and interlibrary loan services. Include fees paid for photocopies, costs of telefacsimile transmission, royalties and access fees paid to provide document delivery or interlibrary loan. Include fees paid to bibliographic utilities if the portion paid for interlibrary loan can be separately counted. Do not count expenditures related to transactions between the main or central library and any libraries reported in Part A, transactions between libraries reported in Part A, or expenditures for on campus delivery.

Other (line 16) — Report any other collection expenditures not already included on lines 10–15 such as expenditures for cartographic materials and manuscripts.

Preservation (line 17) — Report expenditures for the activities associated with maintaining library and archival materials for use either in their original physical form or in some other usable way. This includes but is not limited to binding and rebinding, materials conservation, deacidification, lamination, and restoration.

Furniture and equipment (line 18) — Report expenditures for all library furniture and equipment purchased during the 1996 fiscal year. Include microform equipment, audiovisual equipment, and related maintenance costs.

Computer hardware and software (line 19) — Report expenditures from the library budget for computer hardware and software used to support library operations, whether purchased or leased, mainframe or microcomputer. Include expenditures for maintenance. Include the expenditure for equipment used to run information service products when that expenditure can be separated from the price of the product. Exclude expenditures reported on line 14.

Bibliographic utilities, networks, and consortia (line 20) — Report expenditures for services provided by national, regional, and local bibliographic utilities, networks, and consortia. Exclude expenditures already reported on lines 14 and 15.

All other operating expenditures (line 21) — Report all other expenditures not already reported on lines 7–20 except employee fringe benefits which are reported on line 23. Exclude expenditures for new buildings and building renovations.

Total (line 22) — Report the sum of lines 7 through 21.

Employee fringe benefits (line 23) — If benefits are paid from the library budget, report the amount here.

Part D — LIBRARY COLLECTIONS, FISCAL YEAR 1996

NOTE — Government documents should be included in the count for each format (i.e., lines 24, 25, and 28–41).

Column (1), Total number added during fiscal year — Report the gross number of each category added. Do not subtract the number withdrawn.

Column (2), Total number held at end of fiscal year — Report the total number of each category held at end of fiscal year. To get this figure, take the total number held at the end of the previous fiscal year, add the number added during the fiscal year just ended and subtract the number withdrawn during that period.

Units (lines 26, 30, 33, 34, 36, 37, 39, 41) — An individual physical item of library material. Examples of units are: a volume (books and serials); a reel, sheet, or card (microforms); a sheet or bound atlas (cartographic materials); a filmstrip, slide, photograph, or print (graphic materials); a disk, cassette, cartridge, or reel (sound recordings, film and video materials); a disk, tape, or cartridge (computer files).

Volumes (line 24) — Report the number of volumes of any printed, mimeographed, or processed work contained in one binding or portfolio, hardbound or paperbound, which has been cataloged, classified, or otherwise made ready for use. Include any government documents that are accessible through the library's catalog regardless of whether or not they are separately shelved. This includes documents for which records are provided by the library or downloaded from other sources into the library catalog.

GENERAL INSTRUCTIONS - L — Continued

Titles (lines 25, 27, 29, 31, 35, 38, 40) — Report the number of titles of publications which form a separate bibliographic whole, whether issued in one or several volumes, reels, disks, slides, or parts. The term "publication" applies to printed materials, such as books, periodicals, and government documents, as well as to such formats as microforms, audiovisual materials, and computer files. To determine the number of titles, count each unique bibliographic record in the library's catalog. NOTE — For libraries which have card catalogs, a unique bibliographic record is represented by a shelf list entry. Libraries with electronic catalogs should be careful to distinguish between the BIBLIOGRAPHIC record which describes the title and the ITEM records which describe the individual volumes, parts, reels, disks, etc. associated with the title. Examples: Six copies of the same edition of a title count as one title or bibliographic record; two editions of the same title which have been cataloged or recorded separately count as two bibliographic records; a set of six monographs for which there are six bibliographic records counts as six titles; and two multi-volume sets of the same edition for which one bibliographic record has been made count as one title.

Government documents (lines 26 and 27) — Report the number of units and titles of materials in all formats not accessible through the library catalog and not reported elsewhere.

Current serials (lines 28 and 29) — Report the total number of current serials received including those that are paid for and those received without payment. Include government documents issued serially. Exclude microforms, audiovisual materials, and machine- readable materials.

Microforms (lines 30 and 31) — Report the number of units of microforms and the number of different titles of materials that have been photographically reduced in size for storage, protection and inexpensive publication purposes, and which must be read with the help of enlarging instruments. Examples of microforms are: roll microfilm, microcard, microfiche, and ultrafiche. Include government documents.

Manuscripts and archives (line 32) — Report the linear feet of shelf space occupied by these materials. Manuscripts are handwritten or typed documents, including carbon copies. Archives are non-current records of an organization or institution preserved because of their continuing value. Include government documents.

Cartographic materials (line 33) — Report the number of units of materials representing in whole or in part the earth or any celestial body at any scale. These materials include two- and three-dimensional maps and globes. Include government documents.

Graphic materials (line 34) — Report the number of units of materials for viewing without sound. The materials may or may not be projected or magnified. They include art originals, art prints, art reproductions, slides, transparencies, filmstrips, photographs, pictures, postcards, posters, study prints, and the like. Filmstrips that also include sound should be included on this line. Include government documents.

Sound recordings (lines 35 and 36) — Report the number of units and titles of materials on which sounds (only) are stored (recorded) and that can be reproduced (played back) mechanically, electronically, or both. These materials include audio cassettes, audio cartridges, audio discs, audio reels, talking books, and other sound recordings. Include government documents.

Film and video materials (lines 37 and 38) — Report the number of units and titles of materials on film or video media. Films are produced in a variety of sizes (8, super 8, 16, 35, 55, and 70 mm) and a variety of formats (cartridge, cassette, loop, reel). Video materials include videotapes and laser disks on which pictures and sound are recorded. Include government documents.

Computer files (lines 39 and 40) — Report the number of units and titles of materials such as CD-ROMs, magnetic tapes and magnetic disks, that are designed to be processed by a computer or similar machine. Examples are U.S. Census data tapes, locally-mounted databases, electronic journals, and reference tools on CD-ROM, tape, or floppy disk. Exclude bibliographic records used to manage the collection, library system software, and microcomputer software used only by the library staff. Include current serials. Include government documents. If a CD-ROM subscription for a title is contained on one disc that is updated (i.e., replaced) once a month, count as one unit, not twelve.

Other library materials (line 41) — Report here the number of units of any materials not already included on lines 24–40. Include government documents.

Part E — LIBRARY SERVICES, FISCAL YEAR 1998

Circulation transactions (lines 42 and 43) — Report the number of items lent from the general collection on line 42 and from the reserve collection on line 43 for use usually (although not always) outside the library. These activities include initial charges, either manual or electronic, and also renewals, each of which is reported as a circulation transaction.

Reserve collection (line 43) — Those materials that have been removed from the general library collection and set aside in a library so they will be on hand for a certain course of study or activity in process. Usually, the circulation and length of loan of items in a reserve collection are restricted so that these items will be available to many users who have need of them within a limited time period.

Document delivery/interlibrary loans (lines 44–49) — On lines 44, 45, and 46, report the number of filled requests for material provided to other libraries. On lines 47, 48, and 49, report the number of filled requests for material received from other libraries or document delivery services. Do not include transactions between the main or central library and any libraries reported in Part A or transactions between libraries reported in Part A.

Returnables (lines 44 and 47) — Report materials that the supplier/lending library expects to have returned. Examples of returnables include books, dissertations and theses, microfilm reels, sound recordings, and audiovisual material.

Non-returnables (lines 45 and 48) — Report materials that the supplier/lending library does not expect to have returned. Examples of non-returnables include photocopies or facsimiles, fiche-to-fiche copies, print copies from microfilm, electronic full-text documents, and gratis print copies of unpublished reports and/or departmental working papers.

Information services to groups (lines 50 and 51) — Report the total number of presentations (line 50) and the total number of persons attending or served by those presentations (line 51). Information services to groups are presentations at which a staff member or person invited by a staff member provides information intended for a number of persons and planned in advance. These services may be either bibliographic instruction or library use presentations, or cultural, recreational, or educational presentations. Presentations both on and off the library premises should be included, as long as they are sponsored by the library. Do not include meetings sponsored by other groups using library meeting rooms.

Part F — LIBRARY SERVICES - TYPICAL WEEK FALL 1996

Collect data during a typical week in the fall. A typical week is one that is neither unusually busy nor unusually slow. Avoid vacation periods for key staff or days when unusual events are taking place on the campus or in the library. Choose a week in which the library is open its regular hours. Include any seven consecutive calendar days. If waiting for a typical week in Fall 1996 will delay this form, please use typical week data from the preceding fiscal year. If you have data for the entire year, divide by the number of weeks that the library was open.

Public service hours in a typical week (line 52) — Report an unduplicated count of public service hours in a typical week for both main library and branches reported in Part A using the following method. If a library is open from 9:00 a.m. to 5:00 p.m. Monday through Friday, it should report 40 hours per week. If several of its branches are also open during those hours, the figure remains 40 hours per week. Should Branch A also be open one evening from 7:00 to 9:00, the total hours during which users can find service becomes 42. If Branch B is open the same hours on the same evening, the total remains 42, but if it is open 2 hours on another evening, or from 5:00 to 7:00 on the evening when Branch A is open later, the total becomes 44 hours during which users can find service.

Gate count in a typical week (line 53) — Report the number of persons who physically enter library facilities in a typical week. It is understood that a single person may be counted more than once.

Reference transactions in a typical week (line 54) — Report the total number of reference transactions in a typical week. A reference transaction is an information contact that involves the knowledge, use, recommendation, interpretation, or instruction in the use of one or more information sources by a member of the library staff. Information sources include printed and non-printed materials, machine-readable databases (including assistance with computer searching) catalogs and other holdings records, and, through communication or referral, other libraries and institutions, and persons both inside and outside the library. Include information and referral services. If a contact includes both reference and directional services, it should be reported as one reference transaction. When a staff member utilizes information gained from a previous use of information sources to answer a question, report as a reference transaction, even if the source is not consulted again during this transaction. Duration should not be an element in determining whether a transaction is a reference transaction.

Do not report directional transactions here. A directional transaction is an information contact which facilitates the use of the library in which the contact occurs and which does NOT involve the knowledge, use, recommendation, interpretation, or instruction in the use of any information sources other than those which describe the library, such as schedules, floor plans, handbooks, and policy statements. Examples of directional transactions include giving instruction in locating, within the library, staff, library users, or physical features, etc., and giving assistance of a nonbibliographic nature with machines.

Part G — ELECTRONIC SERVICES

This section requests information about the availability of electronic services in the library and elsewhere on campus and off campus access by your primary clientele, and other users. The questions require a "yes" or "no" response to the availability of the various services listed.

GLOSSARY

ACADEMIC LIBRARIES SURVEY - L

BRANCH INSTITUTION — A campus or site of an educational institution that is not temporary, is located in a community beyond a reasonable commuting distance from its parent institution, and offers organized PROGRAMS of study, not just courses.

COLLEGE WORK-STUDY PROGRAM (CWS) — (Higher Education Act of 1965, as amended, Title IV, Part C; Public Laws 89-329, 92-318, 94-482, et al; 42 USC 2751-2756b.)

Provides part-time employment to eligible postsecondary students to help meet educational expenses. This program provides grants to institutions for partial reimbursement of wages paid to students.

SHARED LIBRARY — A facility housing an organized collection of printed, microform, and audiovisual materials, and (a) is jointly administered by more than one educational institution, or (b) whose funds or operating expenditures have been received from more than one education institution. The location of the facility is not a determining factor.

UNITID CODE — Unique identification number assigned to postsecondary institutions surveyed through the Integrated Postsecondary Education Data System (IPEDS).

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Department of Education
ED Pubs
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Jessup, MD 20794-1398

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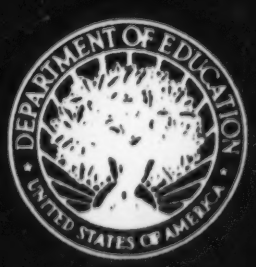

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